**建筑节能设计报告书**

公共建筑

甲类

|  |  |
| --- | --- |
| 工程名称 | 社区活动中心改造建筑 |
| 工程地点 | 四川-成都 |
| 设计编号 |  |
| 建设单位 |  |
| 设计单位 |  |
| 设 计 人 |  |
| 校 对 人 |  |
| 审 核 人 |  |
| 设计日期 | 2021年1月2日 |



|  |  |
| --- | --- |
| 采用软件 | 节能设计BECS2020 |
| 软件版本 | 20190909 |
| 研发单位 | 北京绿建软件有限公司 |
| 正版授权码 | T15984798622 |

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# 建筑概况

|  |  |  |
| --- | --- | --- |
| 工程名称 | 社区活动中心改造建筑 | |
| 工程地点 | 四川-成都 | |
| 地理位置 | 北纬：30.66° | 东经：104.01° |
| 建筑面积 | 地上9948㎡ 地下0㎡ | |
| 建筑层数 | 地上5 地下0 | |
| 建筑高度 | 24.2m | |
| 建筑（节能计算）体积 | 44012.81 | |
| 建筑（节能计算）外表面积 | 12717.35 | |
| 北向角度 | 119 | |
| 结构类型 |  | |
| 外墙太阳辐射吸收系数 | 0.75 | |
| 屋顶太阳辐射吸收系数 | 0.75 | |

# 设计依据

1. 《公共建筑节能设计标准》(GB50189-2015)

2. 《民用建筑热工设计规范》(GB50176)

3. 《建筑外门窗气密，水密，抗风压性能分级及检测方法》（GB/T 7106-2008）

4. 《建筑幕墙》（GB/T 21086-2007）

# 建筑大样



立面图例



1层平面



2层平面



3层平面



4层平面



5层平面

# 规定性指标检查

## 工程材料

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 材料名称 | 导热系数λ | 蓄热系数S | 密度ρ | 比热容Cp | 蒸汽渗透系数u | 备注 |
| W/(m.K) | W/(㎡.K) | kg/m3 | J/(kg.K) | g/(m.h.kPa) |
| 水泥砂浆 | 0.930 | 11.370 | 1800.0 | 1050.0 | 0.0210 | 来源：《民用建筑热工设计规范》GB50176-2016 |
| 节能型烧结空心砌块（孔排数≥9排，孔洞率≥50%）砌体（ρ=801~900） | 0.250 | 4.130 | 850.0 | 1050.0 | 0.0000 |  |
| 石灰砂浆 | 0.810 | 10.070 | 1600.0 | 1050.0 | 0.0443 | 来源：《民用建筑热工设计规范》GB50176-2016 |
| 钢筋混凝土 | 1.740 | 17.200 | 2500.0 | 920.0 | 0.0158 | 来源：《民用建筑热工设计规范》GB50176-2016 |
| 碎石、卵石混凝土(ρ=2300) | 1.510 | 15.360 | 2300.0 | 920.0 | 0.0173 | 来源：《民用建筑热工设计规范》GB50176-2016 |
| 混凝土多孔砖(190六孔砖） | 0.750 | 7.490 | 1450.0 | 709.4 | 0.0000 |  |
| 无机保温砂浆(ρ≤400) | 0.085 | 1.610 | 400.0 | 1050.0 | 0.0000 |  |
| 抗裂砂浆（网格布） | 0.930 | 11.306 | 1800.0 | 1050.0 | 0.0000 |  |
| 玻化微珠保温浆料 | 0.080 | 1.462 | 350.0 | 1050.0 | 0.0000 | 蒸汽渗透系数没有给出 |
| 挤塑聚苯板 | 0.033 | 0.347 | 28.0 | 1790.0 | 0.0000 |  |
| 防水珍珠岩板(ρ=150-200) | 0.060 | 1.060 | 175.0 | 1320.0 | 0.0561 |  |

## 围护结构作法简要说明

**1. 屋顶构造：**屋顶构造一：（由上到下）

碎石、卵石混凝土(ρ=2300) 40mm＋水泥砂浆 20mm＋挤塑聚苯板 40mm＋防水珍珠岩板(ρ=150-200) 30mm＋钢筋混凝土 120mm＋水泥砂浆 20mm

**2. 外墙构造：**外墙构造一：（由外到内）

抗裂砂浆（网格布） 5mm＋玻化微珠保温浆料 30mm＋节能型烧结空心砌块（孔排数≥9排，孔洞率≥50%）砌体（ρ=801~900） 200mm＋无机保温砂浆(ρ≤400) 20mm＋抗裂砂浆（网格布） 5mm

**3. 挑空楼板构造：**挑空楼板构造一：（由上到下）

水泥砂浆 20mm＋钢筋混凝土 120mm＋水泥砂浆 20mm＋挤塑聚苯板 45mm＋水泥砂浆 20mm

**4. 幕墙：**6中透光Low-E+12氩气+6透明-多腔塑料窗框：

传热系数1.600W/m^2.K，太阳得热系数0.326

**5. 外窗：**6中透光Low-E+12氩气+6透明-多腔塑料窗框：

传热系数1.600W/m^2.K，太阳得热系数0.326

**6. 天窗：**6中透光热反射+12A+6透明-多腔塑料窗框：

传热系数2.300W/m^2.K，太阳得热系数0.222

## 体形系数

|  |  |
| --- | --- |
| 外表面积 | 12717.35 |
| 建筑体积 | 44012.81 |
| 体形系数 | 0.29 |

## 窗墙比

### 窗墙比

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 朝向 | 立面 | 窗面积(㎡) | 墙面积(㎡) | 窗墙比 | 限值 | 结论 |
| 南向 | 南-默认立面 | 900.95 | 1915.83 | 0.47 | 0.70 | 适宜 |
| 北向 | 北-默认立面 | 642.50 | 1959.29 | 0.33 | 0.70 | 适宜 |
| 东向 | 东-默认立面 | 249.54 | 1120.82 | 0.22 | 0.70 | 适宜 |
| 西向 | 西-默认立面 | 255.66 | 1167.79 | 0.22 | 0.70 | 适宜 |
| 《标准》依据 | | 《公共建筑节能设计标准》(GB50189-2015)第3.2.2条 | | | | |
| 标准要求 | | 夏热冬冷地区甲类公共建筑各单一立面窗墙面积比 (包括透光幕墙 )均不宜大于0.70 | | | | |
| 结论 | | 适宜 | | | | |

### 外窗表

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 朝向 | 立面 | 编号 | 尺寸 | 楼层 | 数量 | 单个面积 （㎡） | 合计面积 （㎡） |
| 南向 | 南-默认立面 900.95 |  | 18.80×4.20 | 1 | 1 | 78.96 | 78.96 |
|  | 1.35×4.20 | 1 | 1 | 5.67 | 5.67 |
|  | 1.60×2.10 | 1 | 4 | 3.36 | 13.44 |
|  | 1.55×4.20 | 1 | 1 | 6.51 | 6.51 |
|  | 0.68×4.20 | 1 | 1 | 2.84 | 2.84 |
|  | 0.88×4.20 | 1 | 1 | 3.68 | 3.68 |
|  | 0.63×4.20 | 1 | 1 | 2.63 | 2.63 |
|  | 0.43×4.20 | 1 | 1 | 1.79 | 1.79 |
|  | 7.55×4.20 | 1 | 1 | 31.71 | 31.71 |
|  | 1.88×3.00 | 2 | 1 | 5.65 | 5.65 |
|  | 1.60×0.90 | 2 | 2 | 1.44 | 2.88 |
|  | 1.97×3.00 | 2 | 1 | 5.90 | 5.90 |
|  | 0.30×4.00 | 2 | 1 | 1.20 | 1.20 |
|  | 1.80×1.90 | 2 | 2 | 3.42 | 6.84 |
|  | 22.60×4.00 | 2 | 1 | 90.40 | 90.40 |
|  | 0.50×4.00 | 2 | 1 | 2.00 | 2.00 |
|  | 1.86×4.00 | 2 | 1 | 7.44 | 7.44 |
|  | 1.50×0.90 | 2 | 10 | 1.35 | 13.50 |
|  | 1.50×1.60 | 2 | 10 | 2.40 | 24.00 |
|  | 1.10×4.00 | 2 | 1 | 4.40 | 4.40 |
|  | 1.22×4.00 | 2 | 1 | 4.89 | 4.89 |
|  | 1.20×4.00 | 2 | 1 | 4.78 | 4.78 |
|  | 1.17×4.00 | 2 | 1 | 4.68 | 4.68 |
|  | 1.22×4.00 | 2 | 1 | 4.89 | 4.89 |
|  | 1.02×4.00 | 2 | 1 | 4.08 | 4.08 |
|  | 1.63×4.00 | 2 | 1 | 6.52 | 6.52 |
|  | 0.73×4.00 | 2 | 1 | 2.92 | 2.92 |
|  | 0.91×4.00 | 2 | 1 | 3.65 | 3.65 |
|  | 1.79×4.00 | 2 | 1 | 7.15 | 7.15 |
|  | 4.65×4.00 | 2 | 1 | 18.60 | 18.60 |
|  | 0.05×4.00 | 3 | 1 | 0.18 | 0.18 |
|  | 1.00×0.90 | 3 | 26 | 0.90 | 23.40 |
|  | 1.00×1.60 | 3 | 26 | 1.60 | 41.60 |
|  | 0.40×4.00 | 3 | 1 | 1.59 | 1.59 |
|  | 0.39×4.00 | 3 | 1 | 1.54 | 1.54 |
|  | 0.25×4.00 | 3 | 4 | 1.00 | 4.00 |
|  | 0.74×4.00 | 3 | 1 | 2.96 | 2.96 |
|  | 0.34×4.00 | 3 | 1 | 1.36 | 1.36 |
|  | 0.25×4.00 | 3 | 7 | 1.00 | 6.97 |
|  | 0.34×4.00 | 3 | 1 | 1.36 | 1.36 |
|  | 0.11×4.00 | 3 | 1 | 0.42 | 0.42 |
|  | 0.15×4.00 | 3 | 1 | 0.58 | 0.58 |
|  | 0.12×4.00 | 3 | 1 | 0.49 | 0.49 |
|  | 0.13×4.00 | 3 | 1 | 0.51 | 0.51 |
|  | 0.14×4.00 | 3 | 1 | 0.56 | 0.56 |
|  | 0.11×4.00 | 3 | 1 | 0.45 | 0.45 |
|  | 0.13×4.00 | 3 | 1 | 0.50 | 0.50 |
|  | 0.13×4.00 | 3 | 1 | 0.50 | 0.50 |
|  | 0.19×4.00 | 3 | 1 | 0.75 | 0.75 |
|  | 0.06×4.00 | 3 | 1 | 0.26 | 0.26 |
|  | 0.14×4.00 | 3 | 1 | 0.58 | 0.58 |
|  | 0.11×4.00 | 3 | 1 | 0.43 | 0.43 |
|  | 0.10×4.00 | 3 | 1 | 0.40 | 0.40 |
|  | 0.15×4.00 | 3 | 1 | 0.60 | 0.60 |
|  | 0.13×4.00 | 3 | 1 | 0.52 | 0.52 |
|  | 0.12×4.00 | 3 | 1 | 0.48 | 0.48 |
|  | 0.14×4.00 | 3 | 1 | 0.54 | 0.54 |
|  | 0.12×4.00 | 3 | 1 | 0.46 | 0.46 |
|  | 0.09×4.00 | 3 | 1 | 0.34 | 0.34 |
|  | 0.09×4.00 | 3 | 1 | 0.37 | 0.37 |
|  | 0.07×4.00 | 3 | 1 | 0.29 | 0.29 |
|  | 2.38×4.00 | 4 | 1 | 9.54 | 9.54 |
|  | 1.30×0.80 | 4 | 17 | 1.04 | 17.68 |
|  | 1.30×1.70 | 4 | 17 | 2.21 | 37.57 |
|  | 0.13×4.00 | 4 | 4 | 0.53 | 2.11 |
|  | 0.22×4.00 | 4 | 1 | 0.87 | 0.87 |
|  | 0.22×4.00 | 4 | 1 | 0.86 | 0.86 |
|  | 0.17×4.00 | 4 | 1 | 0.67 | 0.67 |
|  | 0.20×4.00 | 4 | 3 | 0.81 | 2.42 |
|  | 0.30×4.00 | 4 | 1 | 1.22 | 1.22 |
|  | 0.22×4.00 | 4 | 2 | 0.86 | 1.73 |
|  | 0.17×4.00 | 4 | 2 | 0.67 | 1.34 |
|  | 0.36×4.00 | 4 | 1 | 1.42 | 1.42 |
|  | 0.71×4.00 | 4 | 1 | 2.82 | 2.82 |
|  | 1.60×1.90 | 4 | 2 | 3.04 | 6.08 |
|  | 0.80×4.00 | 4 | 1 | 3.20 | 3.20 |
| C0715 | 0.70×1.50 | 1~2 | 16 | 1.05 | 16.80 |
| C0915 | 0.90×1.50 | 1~4 | 19 | 1.35 | 25.65 |
| C1015 | 1.00×1.50 | 3 | 26 | 1.50 | 39.00 |
| C1315 | 1.30×1.50 | 1~2,4~5 | 41 | 1.95 | 79.95 |
| C1515 | 1.50×1.50 | 2 | 14 | 2.25 | 31.50 |
| C2121 | 2.10×2.10 | 1~4 | 34 | 4.41 | 149.94 |
| 北向 | 北-默认立面 642.50 |  | 0.49×4.20 | 1 | 1 | 2.05 | 2.05 |
|  | 1.00×0.90 | 1 | 10 | 0.90 | 9.00 |
|  | 1.00×1.80 | 1 | 10 | 1.80 | 18.00 |
|  | 0.25×4.20 | 1 | 1 | 1.05 | 1.05 |
|  | 0.45×4.20 | 1 | 1 | 1.87 | 1.87 |
|  | 0.25×4.20 | 1 | 2 | 1.05 | 2.09 |
|  | 0.41×4.20 | 1 | 1 | 1.71 | 1.71 |
|  | 0.66×4.20 | 1 | 1 | 2.76 | 2.76 |
|  | 1.23×4.20 | 1 | 1 | 5.18 | 5.18 |
|  | 0.29×4.20 | 1 | 1 | 1.23 | 1.23 |
|  | 0.22×4.20 | 1 | 1 | 0.93 | 0.93 |
|  | 0.28×4.20 | 1 | 1 | 1.17 | 1.17 |
|  | 0.22×4.20 | 1 | 1 | 0.94 | 0.94 |
|  | 12.42×4.20 | 1 | 1 | 52.17 | 52.17 |
|  | 0.45×4.20 | 1 | 1 | 1.91 | 1.91 |
|  | 1.60×2.10 | 1 | 8 | 3.36 | 26.88 |
|  | 0.26×4.20 | 1 | 1 | 1.07 | 1.07 |
|  | 1.13×4.20 | 1 | 1 | 4.73 | 4.73 |
|  | 1.12×4.20 | 1 | 1 | 4.72 | 4.72 |
|  | 0.04×4.20 | 1 | 1 | 0.17 | 0.17 |
|  | 0.70×0.80 | 1 | 4 | 0.56 | 2.24 |
|  | 0.70×1.90 | 1 | 4 | 1.33 | 5.32 |
|  | 0.88×4.20 | 1 | 1 | 3.70 | 3.70 |
|  | 1.50×0.80 | 1,4 | 8 | 1.20 | 9.60 |
|  | 1.50×1.90 | 1 | 3 | 2.85 | 8.55 |
|  | 0.88×4.20 | 1 | 1 | 3.68 | 3.68 |
|  | 0.90×0.80 | 1 | 1 | 0.72 | 0.72 |
|  | 0.90×1.90 | 1,4 | 7 | 1.71 | 11.97 |
|  | 0.72×4.20 | 1 | 1 | 3.03 | 3.03 |
|  | 0.76×4.20 | 1 | 1 | 3.18 | 3.18 |
|  | 0.63×4.20 | 1 | 1 | 2.63 | 2.63 |
|  | 0.38×4.20 | 1 | 1 | 1.58 | 1.58 |
|  | 0.37×4.20 | 1 | 1 | 1.57 | 1.57 |
|  | 0.46×4.20 | 1 | 1 | 1.92 | 1.92 |
|  | 0.35×4.20 | 1 | 1 | 1.48 | 1.48 |
|  | 1.75×4.20 | 1 | 1 | 7.33 | 7.33 |
|  | 0.05×4.00 | 3 | 1 | 0.20 | 0.20 |
|  | 2.50×1.90 | 3 | 8 | 4.75 | 37.98 |
|  | 0.00×1.90 | 3 | 4 | 0.00 | 0.01 |
|  | 2.50×1.90 | 3 | 4 | 4.75 | 19.00 |
|  | 0.60×4.00 | 3 | 1 | 2.40 | 2.40 |
|  | 0.58×4.00 | 3 | 1 | 2.30 | 2.30 |
|  | 0.63×4.00 | 3 | 1 | 2.50 | 2.50 |
|  | 0.20×4.00 | 3 | 1 | 0.80 | 0.80 |
|  | 2.90×4.00 | 3 | 1 | 11.60 | 11.60 |
|  | 2.15×4.00 | 3 | 2 | 8.60 | 17.20 |
|  | 1.60×1.90 | 3 | 2 | 3.04 | 6.08 |
|  | 0.70×4.00 | 4 | 1 | 2.79 | 2.79 |
|  | 1.10×0.90 | 4 | 6 | 0.99 | 5.94 |
|  | 1.10×1.00 | 4 | 6 | 1.10 | 6.60 |
|  | 1.05×4.00 | 4 | 1 | 4.21 | 4.21 |
|  | 0.78×4.00 | 4 | 1 | 3.11 | 3.11 |
|  | 1.07×4.00 | 4 | 1 | 4.29 | 4.29 |
|  | 0.40×4.00 | 4 | 1 | 1.60 | 1.60 |
|  | 0.81×4.00 | 4 | 1 | 3.24 | 3.24 |
|  | 1.14×4.00 | 4 | 1 | 4.56 | 4.56 |
|  | 0.73×4.00 | 4 | 1 | 2.91 | 2.91 |
|  | 0.82×4.00 | 4 | 1 | 3.29 | 3.29 |
|  | 0.62×4.00 | 4 | 1 | 2.49 | 2.49 |
|  | 1.13×4.00 | 4 | 1 | 4.51 | 4.51 |
|  | 0.70×4.00 | 4 | 1 | 2.80 | 2.80 |
|  | 0.85×4.00 | 4 | 1 | 3.40 | 3.40 |
| C0715 | 0.70×1.50 | 1~2 | 8 | 1.05 | 8.40 |
| C0915 | 0.90×1.50 | 1~4 | 20 | 1.35 | 27.00 |
| C0921 | 0.90×2.10 | 2 | 4 | 1.89 | 7.56 |
| C1015 | 1.00×1.50 | 1 | 10 | 1.50 | 15.00 |
| C1021 | 1.00×2.10 | 2 | 2 | 2.10 | 4.20 |
| C1121 | 1.10×2.10 | 4 | 6 | 2.31 | 13.86 |
| C1215 | 1.20×1.50 | 1,3 | 20 | 1.80 | 36.00 |
| C1221 | 1.20×2.10 | 2 | 2 | 2.52 | 5.04 |
| C1315 | 1.30×1.50 | 1,4~5 | 16 | 1.95 | 31.20 |
| C1515 | 1.50×1.50 | 1~2 | 19 | 2.25 | 42.75 |
| C1521 | 1.50×2.10 | 1 | 4 | 3.15 | 12.60 |
| C2121 | 2.10×2.10 | 2 | 9 | 4.41 | 39.69 |
| C2715 | 2.70×1.50 | 3 | 1 | 4.05 | 4.05 |
| C3615 | 3.60×1.50 | 2 | 1 | 5.40 | 5.40 |
| C4015 | 4.00×1.50 | 3 | 1 | 6.00 | 6.00 |
| C6615 | 6.60×1.50 | 2~3 | 2 | 9.90 | 19.80 |
| 东向 | 东-默认立面 249.54 |  | 0.85×4.20 | 1 | 2 | 3.57 | 7.14 |
|  | 1.60×2.10 | 1 | 4 | 3.36 | 13.44 |
|  | 4.10×4.20 | 1 | 1 | 17.22 | 17.22 |
|  | 0.10×4.20 | 1 | 1 | 0.42 | 0.42 |
|  | 0.30×4.20 | 1 | 1 | 1.26 | 1.26 |
|  | 3.95×4.20 | 1 | 1 | 16.59 | 16.59 |
|  | 5.18×4.20 | 1 | 1 | 21.76 | 21.76 |
|  | 5.15×4.00 | 2,4 | 2 | 20.60 | 41.20 |
|  | 5.00×4.00 | 3 | 1 | 20.00 | 20.00 |
|  | 0.48×4.00 | 3 | 2 | 1.90 | 3.80 |
|  | 1.80×1.90 | 3 | 1 | 3.42 | 3.42 |
| C0715 | 0.70×1.50 | 3 | 1 | 1.05 | 1.05 |
| C0915 | 0.90×1.50 | 1~5 | 15 | 1.35 | 20.25 |
| C1015 | 1.00×1.50 | 4~5 | 4 | 1.50 | 6.00 |
| C1315 | 1.30×1.50 | 4~5 | 21 | 1.95 | 40.95 |
| C1415 | 1.38×1.50 | 2 | 2 | 2.07 | 4.14 |
| C1515 | 1.50×1.50 | 3 | 1 | 2.25 | 2.25 |
| C4015 | 4.00×1.50 | 2 | 2 | 6.00 | 12.00 |
| C4515 | 4.50×1.50 | 2 | 1 | 6.75 | 6.75 |
| C6615 | 6.60×1.50 | 3 | 1 | 9.90 | 9.90 |
| 西向 | 西-默认立面 255.66 |  | 0.86×4.20 | 1 | 1 | 3.59 | 3.59 |
|  | 1.50×2.10 | 1 | 2 | 3.15 | 6.30 |
|  | 0.10×4.20 | 1 | 1 | 0.42 | 0.42 |
|  | 0.70×4.20 | 1 | 1 | 2.92 | 2.92 |
|  | 4.95×4.20 | 1 | 1 | 20.79 | 20.79 |
|  | 0.80×4.20 | 1 | 3 | 3.36 | 10.08 |
|  | 1.20×4.20 | 1 | 1 | 5.04 | 5.04 |
|  | 0.30×4.20 | 1 | 1 | 1.26 | 1.26 |
|  | 1.80×2.10 | 1 | 1 | 3.78 | 3.78 |
|  | 0.50×4.20 | 1 | 1 | 2.10 | 2.10 |
|  | 1.82×4.20 | 1 | 1 | 7.64 | 7.64 |
|  | 4.50×0.80 | 1 | 1 | 3.60 | 3.60 |
|  | 4.50×1.90 | 1 | 1 | 8.55 | 8.55 |
|  | 1.18×4.20 | 1 | 1 | 4.96 | 4.96 |
|  | 8.65×4.00 | 2 | 1 | 34.60 | 34.60 |
|  | 0.20×4.00 | 2 | 1 | 0.81 | 0.81 |
|  | 1.00×0.80 | 2 | 1 | 0.80 | 0.80 |
|  | 1.00×1.70 | 2 | 1 | 1.70 | 1.70 |
|  | 0.06×4.00 | 2 | 1 | 0.25 | 0.25 |
|  | 1.20×0.80 | 2 | 3 | 0.96 | 2.88 |
|  | 1.20×1.70 | 2 | 3 | 2.04 | 6.12 |
|  | 0.10×4.00 | 2 | 1 | 0.39 | 0.39 |
|  | 0.09×4.00 | 2 | 1 | 0.37 | 0.37 |
|  | 0.10×4.00 | 2 | 1 | 0.38 | 0.38 |
| C0715 | 0.70×1.50 | 2~4 | 8 | 1.05 | 8.40 |
| C0915 | 0.90×1.50 | 1~5 | 28 | 1.35 | 37.80 |
| C1015 | 1.00×1.50 | 2 | 1 | 1.50 | 1.50 |
| C1215 | 1.20×1.50 | 2~3 | 6 | 1.80 | 10.80 |
| C1315 | 1.30×1.50 | 2,4~5 | 13 | 1.95 | 25.35 |
| C1415 | 1.38×1.50 | 1~3 | 10 | 2.07 | 20.70 |
| C1515 | 1.50×1.50 | 2~3 | 5 | 2.25 | 11.25 |
| C2118 | 2.10×1.80 | 1 | 1 | 3.78 | 3.78 |
| C4515 | 4.50×1.50 | 1 | 1 | 6.75 | 6.75 |

## 可见光透射比

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 朝向 | 立面 | 窗墙比 | 最不利窗编号 | 最不利透射比 | 透射比限值 |
| 南向 | 南-默认立面 | 0.47 | C1315 | 0.62 | 0.40 |
| 北向 | 北-默认立面 | 0.33 | C1315 | 0.62 | 0.60 |
| 东向 | 东-默认立面 | 0.22 | C1015 | 0.62 | 0.60 |
| 西向 | 西-默认立面 | 0.22 | C0915 | 0.62 | 0.60 |
| 标准依据 | | 《公共建筑节能设计标准》(GB50189-2015)第3.2.4条 | | | |
| 标准要求 | | 当窗墙面积比小于0.40时，玻璃的可见光透射比不应当小于0.6;当窗墙面积比大于等于0.40时，玻璃的可见光透射比不应当小于0.4; | | | |
| 结论 | | 满足 | | | |

## 天窗

### 天窗屋顶比

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 房间 | 天窗编号 | 天窗面积（㎡） | 屋顶面积（㎡） | 面积比 |
| 3001 |  | 58.53 | 808.27 | 0.07 |
| 整栋建筑 | | 58.53 | 4528.64 | 0.01 |
| 标准依据 | 《公共建筑节能设计标准》(GB50189-2015)第3.2.7条 | | | |
| 标准要求 | 天窗面积不应大于屋顶总面积的20% | | | |
| 结论 | 满足 | | | |

### 天窗类型

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 序号 | 构造名称 | 构造编号 | 传热系数 | 综合太阳得热系数 | 备注 |
| 1 | 6中透光热反射+12A+6透明-多腔塑料窗框 | 66 | 2.30 | 0.22 | 可见光透射比=0.280 |
| 平均 | |  | 2.30 | 0.22 |  |
| 标准依据 | | 《公共建筑节能设计标准》(GB50189-2015)第3.3.1条 | | | |
| 标准要求 | | K≤2.6,SHGC≤0.3 | | | |
| 结论 | | 满足 | | | |

## 屋顶构造

### 屋顶构造一

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 材料名称 （由上到下） | 厚度δ | 导热系数λ | 蓄热系数S | 修正系数 | 热阻R | 热惰性指标 |
| (mm) | W/(m.K) | W/(㎡.K) | α | (㎡K)/W | D=R\*S |
| 碎石、卵石混凝土(ρ=2300) | 40 | 1.510 | 15.360 | 1.00 | 0.026 | 0.407 |
| 水泥砂浆 | 20 | 0.930 | 11.370 | 1.00 | 0.022 | 0.245 |
| 挤塑聚苯板 | 40 | 0.033 | 0.347 | 1.00 | 1.212 | 0.421 |
| 防水珍珠岩板(ρ=150-200) | 30 | 0.060 | 1.060 | 1.00 | 0.500 | 0.530 |
| 钢筋混凝土 | 120 | 1.740 | 17.200 | 1.00 | 0.069 | 1.186 |
| 水泥砂浆 | 20 | 0.930 | 11.370 | 1.00 | 0.022 | 0.245 |
| 各层之和∑ | 270 | － | － | － | 1.851 | 3.033 |
| 外表面太阳辐射吸收系数 | 0.75[默认] | | | | | |
| 传热系数K=1/(0.16+∑R) | 0.50 | | | | | |
| 标准依据 | 《公共建筑节能设计标准》(GB50189-2015)第3.3.1条 | | | | | |
| 标准要求 | K应满足表3.3.1-4的规定(K≤0.50) | | | | | |
| 结论 | 满足 | | | | | |

## 外墙构造

### 外墙相关构造

#### 外墙构造一

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 材料名称 （由外到内） | 厚度δ | 导热系数λ | 蓄热系数S | 修正系数 | 热阻R | 热惰性指标 |
| (mm) | W/(m.K) | W/(㎡.K) | α | (㎡K)/W | D=R\*S |
| 抗裂砂浆（网格布） | 5 | 0.930 | 11.306 | 1.00 | 0.005 | 0.061 |
| 玻化微珠保温浆料 | 30 | 0.080 | 1.462 | 1.15 | 0.326 | 0.548 |
| 节能型烧结空心砌块（孔排数≥9排，孔洞率≥50%）砌体（ρ=801~900） | 200 | 0.250 | 4.130 | 1.00 | 0.800 | 3.304 |
| 无机保温砂浆(ρ≤400) | 20 | 0.085 | 1.610 | 1.00 | 0.235 | 0.379 |
| 抗裂砂浆（网格布） | 5 | 0.930 | 11.306 | 1.00 | 0.005 | 0.061 |
| 各层之和∑ | 260 | － | － | － | 1.372 | 4.353 |
| 外表面太阳辐射吸收系数 | 0.75[默认] | | | | | |
| 传热系数K=1/(0.16+∑R) | 0.65 | | | | | |

#### 热桥柱构造一

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 材料名称 （由外到内） | 厚度δ | 导热系数λ | 蓄热系数S | 修正系数 | 热阻R | 热惰性指标 |
| (mm) | W/(m.K) | W/(㎡.K) | α | (㎡K)/W | D=R\*S |
| 水泥砂浆 | 20 | 0.930 | 11.370 | 1.00 | 0.022 | 0.245 |
| 玻化微珠保温浆料 | 30 | 0.080 | 1.462 | 1.15 | 0.326 | 0.548 |
| 水泥砂浆 | 20 | 0.930 | 11.370 | 1.00 | 0.022 | 0.245 |
| 钢筋混凝土 | 200 | 1.740 | 17.200 | 1.00 | 0.115 | 1.977 |
| 石灰砂浆 | 20 | 0.810 | 10.070 | 1.00 | 0.025 | 0.249 |
| 各层之和∑ | 290 | － | － | － | 0.509 | 3.263 |
| 外表面太阳辐射吸收系数 | 0.75[默认] | | | | | |
| 传热系数K=1/(0.16+∑R) | 1.50 | | | | | |

### 外墙主断面传热系数的修正系数ψ



### 外墙平均热工特性

1.　南向

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 构造名称 | 构件类型 | 面积(㎡) | 面积所占比例 | 传热系数K W / (㎡K) | 热惰性指标D | 太阳辐射吸收系数 |
| 外墙构造一 | 主墙体 | 976.03 | 1.000 | 0.65 | 4.35 | 0.75 |
| 考虑线性热桥后K | 0.65 × 1.10 = 0.72 | | | | | |

2.　北向

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 构造名称 | 构件类型 | 面积(㎡) | 面积所占比例 | 传热系数K W / (㎡K) | 热惰性指标D | 太阳辐射吸收系数 |
| 外墙构造一 | 主墙体 | 1199.62 | 1.000 | 0.65 | 4.35 | 0.75 |
| 考虑线性热桥后K | 0.65 × 1.10 = 0.72 | | | | | |

3.　东向

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 构造名称 | 构件类型 | 面积(㎡) | 面积所占比例 | 传热系数K W / (㎡K) | 热惰性指标D | 太阳辐射吸收系数 |
| 外墙构造一 | 主墙体 | 844.19 | 1.000 | 0.65 | 4.35 | 0.75 |
| 考虑线性热桥后K | 0.65 × 1.10 = 0.72 | | | | | |

4.　西向

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 构造名称 | 构件类型 | 面积(㎡) | 面积所占比例 | 传热系数K W / (㎡K) | 热惰性指标D | 太阳辐射吸收系数 |
| 外墙构造一 | 主墙体 | 880.21 | 1.000 | 0.65 | 4.35 | 0.75 |
| 考虑线性热桥后K | 0.65 × 1.10 = 0.72 | | | | | |

5.　总体

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 构造名称 | 构件类型 | 面积(㎡) | 面积所占比例 | 传热系数K W / (㎡K) | 热惰性指标D | 太阳辐射吸收系数 |
| 外墙构造一 | 主墙体 | 3900.05 | 1.000 | 0.65 | 4.35 | 0.75 |
| 考虑线性热桥后K | 0.65 × 1.10 = 0.72 | | | | | |
| 标准依据 | 《公共建筑节能设计标准》(GB50189-2015)第3.3.1条 | | | | | |
| 标准要求 | K应满足表3.3.1-4的规定(K≤0.80) | | | | | |
| 结论 | 满足 | | | | | |

## 挑空楼板构造

### 挑空楼板构造一

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 材料名称 （由上到下） | 厚度δ | 导热系数λ | 蓄热系数S | 修正系数 | 热阻R | 热惰性指标 |
| (mm) | W/(m.K) | W/(㎡.K) | α | (㎡K)/W | D=R\*S |
| 水泥砂浆 | 20 | 0.930 | 11.370 | 1.00 | 0.022 | 0.245 |
| 钢筋混凝土 | 120 | 1.740 | 17.200 | 1.00 | 0.069 | 1.186 |
| 水泥砂浆 | 20 | 0.930 | 11.370 | 1.00 | 0.022 | 0.245 |
| 挤塑聚苯板 | 45 | 0.033 | 0.347 | 1.00 | 1.364 | 0.473 |
| 水泥砂浆 | 20 | 0.930 | 11.370 | 1.00 | 0.022 | 0.245 |
| 各层之和∑ | 225 | － | － | － | 1.497 | 2.393 |
| 传热系数K=1/(0.16+∑R) | 0.60 | | | | | |
| 标准依据 | 《公共建筑节能设计标准》(GB50189-2015)第3.3.1条 | | | | | |
| 标准要求 | K≤0.70 | | | | | |
| 结论 | 满足 | | | | | |

## 外窗热工

### 外窗构造

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 序号 | 构造名称 | 构造编号 | 传热系数 | 太阳得热系数 | 可见光透射比 | 备注 |
| 1 | 6中透光Low-E+12氩气+6透明-多腔塑料窗框 | 65 | 1.60 | 0.33 | 0.620 | 可见光透射比=0.620 |
| 2 | 6中透光Low-E+12氩气+6透明-多腔塑料窗框 | 18 | 1.60 | 0.33 | 0.620 | 可见光透射比=0.620 |

### 外遮阳类型

已启用环境遮阳

### 平均传热系数

1. 南向：

南-默认立面

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 序号 | 门窗编号 | 楼层 | 数量 | 单个面积（㎡） | 总面积（㎡） | 构造编号 | 传热系数 |
| 1 |  | 1 | 1 | 78.960 | 78.960 | 65 | 1.600 |
| 2 |  | 1 | 1 | 5.670 | 5.670 | 65 | 1.600 |
| 3 |  | 1 | 4 | 3.360 | 13.440 | 65 | 1.600 |
| 4 |  | 1 | 1 | 6.510 | 6.510 | 65 | 1.600 |
| 5 |  | 1 | 1 | 2.835 | 2.835 | 65 | 1.600 |
| 6 |  | 1 | 1 | 3.675 | 3.675 | 65 | 1.600 |
| 7 |  | 1 | 1 | 2.625 | 2.625 | 65 | 1.600 |
| 8 |  | 1 | 1 | 1.785 | 1.785 | 65 | 1.600 |
| 9 |  | 1 | 1 | 31.710 | 31.710 | 65 | 1.600 |
| 10 |  | 2 | 1 | 5.649 | 5.649 | 65 | 1.600 |
| 11 |  | 2 | 2 | 1.440 | 2.880 | 65 | 1.600 |
| 12 |  | 2 | 1 | 5.901 | 5.901 | 65 | 1.600 |
| 13 |  | 2 | 1 | 1.200 | 1.200 | 65 | 1.600 |
| 14 |  | 2 | 2 | 3.420 | 6.840 | 65 | 1.600 |
| 15 |  | 2 | 1 | 90.400 | 90.400 | 65 | 1.600 |
| 16 |  | 2 | 1 | 2.000 | 2.000 | 65 | 1.600 |
| 17 |  | 2 | 1 | 7.436 | 7.436 | 65 | 1.600 |
| 18 |  | 2 | 10 | 1.350 | 13.500 | 65 | 1.600 |
| 19 |  | 2 | 10 | 2.400 | 24.000 | 65 | 1.600 |
| 20 |  | 2 | 1 | 4.400 | 4.400 | 65 | 1.600 |
| 21 |  | 2 | 1 | 4.892 | 4.892 | 65 | 1.600 |
| 22 |  | 2 | 1 | 4.784 | 4.784 | 65 | 1.600 |
| 23 |  | 2 | 1 | 4.676 | 4.676 | 65 | 1.600 |
| 24 |  | 2 | 1 | 4.888 | 4.888 | 65 | 1.600 |
| 25 |  | 2 | 1 | 4.084 | 4.084 | 65 | 1.600 |
| 26 |  | 2 | 1 | 6.520 | 6.520 | 65 | 1.600 |
| 27 |  | 2 | 1 | 2.920 | 2.920 | 65 | 1.600 |
| 28 |  | 2 | 1 | 3.648 | 3.648 | 65 | 1.600 |
| 29 |  | 2 | 1 | 7.152 | 7.152 | 65 | 1.600 |
| 30 |  | 2 | 1 | 18.600 | 18.600 | 65 | 1.600 |
| 31 |  | 3 | 1 | 0.184 | 0.184 | 65 | 1.600 |
| 32 |  | 3 | 26 | 0.900 | 23.400 | 65 | 1.600 |
| 33 |  | 3 | 26 | 1.600 | 41.600 | 65 | 1.600 |
| 34 |  | 3 | 1 | 1.592 | 1.592 | 65 | 1.600 |
| 35 |  | 3 | 1 | 1.544 | 1.544 | 65 | 1.600 |
| 36 |  | 3 | 4 | 1.000 | 4.000 | 65 | 1.600 |
| 37 |  | 3 | 1 | 2.960 | 2.960 | 65 | 1.600 |
| 38 |  | 3 | 1 | 1.364 | 1.364 | 65 | 1.600 |
| 39 |  | 3 | 7 | 0.996 | 6.972 | 65 | 1.600 |
| 40 |  | 3 | 1 | 1.360 | 1.360 | 65 | 1.600 |
| 41 |  | 3 | 1 | 0.420 | 0.420 | 65 | 1.600 |
| 42 |  | 3 | 1 | 0.580 | 0.580 | 65 | 1.600 |
| 43 |  | 3 | 1 | 0.492 | 0.492 | 65 | 1.600 |
| 44 |  | 3 | 1 | 0.508 | 0.508 | 65 | 1.600 |
| 45 |  | 3 | 1 | 0.556 | 0.556 | 65 | 1.600 |
| 46 |  | 3 | 1 | 0.448 | 0.448 | 65 | 1.600 |
| 47 |  | 3 | 1 | 0.504 | 0.504 | 65 | 1.600 |
| 48 |  | 3 | 1 | 0.500 | 0.500 | 65 | 1.600 |
| 49 |  | 3 | 1 | 0.748 | 0.748 | 65 | 1.600 |
| 50 |  | 3 | 1 | 0.256 | 0.256 | 65 | 1.600 |
| 51 |  | 3 | 1 | 0.576 | 0.576 | 65 | 1.600 |
| 52 |  | 3 | 1 | 0.428 | 0.428 | 65 | 1.600 |
| 53 |  | 3 | 1 | 0.404 | 0.404 | 65 | 1.600 |
| 54 |  | 3 | 1 | 0.600 | 0.600 | 65 | 1.600 |
| 55 |  | 3 | 1 | 0.524 | 0.524 | 65 | 1.600 |
| 56 |  | 3 | 1 | 0.480 | 0.480 | 65 | 1.600 |
| 57 |  | 3 | 1 | 0.540 | 0.540 | 65 | 1.600 |
| 58 |  | 3 | 1 | 0.460 | 0.460 | 65 | 1.600 |
| 59 |  | 3 | 1 | 0.340 | 0.340 | 65 | 1.600 |
| 60 |  | 3 | 1 | 0.368 | 0.368 | 65 | 1.600 |
| 61 |  | 3 | 1 | 0.292 | 0.292 | 65 | 1.600 |
| 62 |  | 4 | 1 | 9.536 | 9.536 | 65 | 1.600 |
| 63 |  | 4 | 17 | 1.040 | 17.680 | 65 | 1.600 |
| 64 |  | 4 | 17 | 2.210 | 37.570 | 65 | 1.600 |
| 65 |  | 4 | 4 | 0.528 | 2.112 | 65 | 1.600 |
| 66 |  | 4 | 1 | 0.872 | 0.872 | 65 | 1.600 |
| 67 |  | 4 | 1 | 0.860 | 0.860 | 65 | 1.600 |
| 68 |  | 4 | 1 | 0.672 | 0.672 | 65 | 1.600 |
| 69 |  | 4 | 3 | 0.808 | 2.424 | 65 | 1.600 |
| 70 |  | 4 | 1 | 1.216 | 1.216 | 65 | 1.600 |
| 71 |  | 4 | 2 | 0.864 | 1.728 | 65 | 1.600 |
| 72 |  | 4 | 2 | 0.668 | 1.336 | 65 | 1.600 |
| 73 |  | 4 | 1 | 1.424 | 1.424 | 65 | 1.600 |
| 74 |  | 4 | 1 | 2.820 | 2.820 | 65 | 1.600 |
| 75 |  | 4 | 2 | 3.040 | 6.080 | 65 | 1.600 |
| 76 |  | 4 | 1 | 3.200 | 3.200 | 65 | 1.600 |
| 77 | C0715 | 1~2 | 16 | 1.050 | 16.800 | 18 | 1.600 |
| 78 | C0915 | 1~4 | 19 | 1.350 | 25.650 | 18 | 1.600 |
| 79 | C1015 | 3 | 26 | 1.500 | 39.000 | 18 | 1.600 |
| 80 | C1315 | 1~2,4~5 | 41 | 1.950 | 79.950 | 18 | 1.600 |
| 81 | C1515 | 2 | 14 | 2.250 | 31.500 | 18 | 1.600 |
| 82 | C2121 | 1~4 | 34 | 4.410 | 149.940 | 18 | 1.600 |
| 立面总面积(㎡) | | | 900.950 | 立面平均传热系数 | | | 1.600 |

2. 北向：

北-默认立面

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 序号 | 门窗编号 | 楼层 | 数量 | 单个面积（㎡） | 总面积（㎡） | 构造编号 | 传热系数 |
| 1 |  | 1 | 1 | 2.054 | 2.054 | 65 | 1.600 |
| 2 |  | 1 | 10 | 0.900 | 9.000 | 65 | 1.600 |
| 3 |  | 1 | 10 | 1.800 | 18.000 | 65 | 1.600 |
| 4 |  | 1 | 1 | 1.050 | 1.050 | 65 | 1.600 |
| 5 |  | 1 | 1 | 1.873 | 1.873 | 65 | 1.600 |
| 6 |  | 1 | 2 | 1.046 | 2.092 | 65 | 1.600 |
| 7 |  | 1 | 1 | 1.714 | 1.714 | 65 | 1.600 |
| 8 |  | 1 | 1 | 2.764 | 2.764 | 65 | 1.600 |
| 9 |  | 1 | 1 | 5.183 | 5.183 | 65 | 1.600 |
| 10 |  | 1 | 1 | 1.235 | 1.235 | 65 | 1.600 |
| 11 |  | 1 | 1 | 0.928 | 0.928 | 65 | 1.600 |
| 12 |  | 1 | 1 | 1.172 | 1.172 | 65 | 1.600 |
| 13 |  | 1 | 1 | 0.937 | 0.937 | 65 | 1.600 |
| 14 |  | 1 | 1 | 52.172 | 52.172 | 65 | 1.600 |
| 15 |  | 1 | 1 | 1.907 | 1.907 | 65 | 1.600 |
| 16 |  | 1 | 8 | 3.360 | 26.880 | 65 | 1.600 |
| 17 |  | 1 | 1 | 1.071 | 1.071 | 65 | 1.600 |
| 18 |  | 1 | 1 | 4.729 | 4.729 | 65 | 1.600 |
| 19 |  | 1 | 1 | 4.721 | 4.721 | 65 | 1.600 |
| 20 |  | 1 | 1 | 0.168 | 0.168 | 65 | 1.600 |
| 21 |  | 1 | 4 | 0.560 | 2.240 | 65 | 1.600 |
| 22 |  | 1 | 4 | 1.330 | 5.320 | 65 | 1.600 |
| 23 |  | 1 | 1 | 3.696 | 3.696 | 65 | 1.600 |
| 24 |  | 1,4 | 8 | 1.200 | 9.600 | 65 | 1.600 |
| 25 |  | 1 | 3 | 2.850 | 8.550 | 65 | 1.600 |
| 26 |  | 1 | 1 | 3.679 | 3.679 | 65 | 1.600 |
| 27 |  | 1 | 1 | 0.720 | 0.720 | 65 | 1.600 |
| 28 |  | 1,4 | 7 | 1.710 | 11.970 | 65 | 1.600 |
| 29 |  | 1 | 1 | 3.032 | 3.032 | 65 | 1.600 |
| 30 |  | 1 | 1 | 3.175 | 3.175 | 65 | 1.600 |
| 31 |  | 1 | 1 | 2.625 | 2.625 | 65 | 1.600 |
| 32 |  | 1 | 1 | 1.575 | 1.575 | 65 | 1.600 |
| 33 |  | 1 | 1 | 1.567 | 1.567 | 65 | 1.600 |
| 34 |  | 1 | 1 | 1.915 | 1.915 | 65 | 1.600 |
| 35 |  | 1 | 1 | 1.478 | 1.478 | 65 | 1.600 |
| 36 |  | 1 | 1 | 7.329 | 7.329 | 65 | 1.600 |
| 37 |  | 3 | 1 | 0.204 | 0.204 | 65 | 1.600 |
| 38 |  | 3 | 8 | 4.748 | 37.985 | 65 | 1.600 |
| 39 |  | 3 | 4 | 0.002 | 0.008 | 65 | 1.600 |
| 40 |  | 3 | 4 | 4.750 | 19.000 | 65 | 1.600 |
| 41 |  | 3 | 1 | 2.404 | 2.404 | 65 | 1.600 |
| 42 |  | 3 | 1 | 2.304 | 2.304 | 65 | 1.600 |
| 43 |  | 3 | 1 | 2.504 | 2.504 | 65 | 1.600 |
| 44 |  | 3 | 1 | 0.800 | 0.800 | 65 | 1.600 |
| 45 |  | 3 | 1 | 11.600 | 11.600 | 65 | 1.600 |
| 46 |  | 3 | 2 | 8.600 | 17.200 | 65 | 1.600 |
| 47 |  | 3 | 2 | 3.040 | 6.080 | 65 | 1.600 |
| 48 |  | 4 | 1 | 2.792 | 2.792 | 65 | 1.600 |
| 49 |  | 4 | 6 | 0.990 | 5.940 | 65 | 1.600 |
| 50 |  | 4 | 6 | 1.100 | 6.600 | 65 | 1.600 |
| 51 |  | 4 | 1 | 4.208 | 4.208 | 65 | 1.600 |
| 52 |  | 4 | 1 | 3.112 | 3.112 | 65 | 1.600 |
| 53 |  | 4 | 1 | 4.288 | 4.288 | 65 | 1.600 |
| 54 |  | 4 | 1 | 1.600 | 1.600 | 65 | 1.600 |
| 55 |  | 4 | 1 | 3.240 | 3.240 | 65 | 1.600 |
| 56 |  | 4 | 1 | 4.560 | 4.560 | 65 | 1.600 |
| 57 |  | 4 | 1 | 2.908 | 2.908 | 65 | 1.600 |
| 58 |  | 4 | 1 | 3.292 | 3.292 | 65 | 1.600 |
| 59 |  | 4 | 1 | 2.492 | 2.492 | 65 | 1.600 |
| 60 |  | 4 | 1 | 4.508 | 4.508 | 65 | 1.600 |
| 61 |  | 4 | 1 | 2.796 | 2.796 | 65 | 1.600 |
| 62 |  | 4 | 1 | 3.404 | 3.404 | 65 | 1.600 |
| 63 | C0715 | 1~2 | 8 | 1.050 | 8.400 | 18 | 1.600 |
| 64 | C0915 | 1~4 | 20 | 1.350 | 27.000 | 18 | 1.600 |
| 65 | C0921 | 2 | 4 | 1.890 | 7.560 | 18 | 1.600 |
| 66 | C1015 | 1 | 10 | 1.500 | 15.000 | 18 | 1.600 |
| 67 | C1021 | 2 | 2 | 2.100 | 4.200 | 18 | 1.600 |
| 68 | C1121 | 4 | 6 | 2.310 | 13.860 | 18 | 1.600 |
| 69 | C1215 | 1,3 | 20 | 1.800 | 36.000 | 18 | 1.600 |
| 70 | C1221 | 2 | 2 | 2.520 | 5.040 | 18 | 1.600 |
| 71 | C1315 | 1,4~5 | 16 | 1.950 | 31.200 | 18 | 1.600 |
| 72 | C1515 | 1~2 | 19 | 2.250 | 42.750 | 18 | 1.600 |
| 73 | C1521 | 1 | 4 | 3.150 | 12.600 | 18 | 1.600 |
| 74 | C2121 | 2 | 9 | 4.410 | 39.690 | 18 | 1.600 |
| 75 | C2715 | 3 | 1 | 4.050 | 4.050 | 18 | 1.600 |
| 76 | C3615 | 2 | 1 | 5.400 | 5.400 | 18 | 1.600 |
| 77 | C4015 | 3 | 1 | 6.000 | 6.000 | 18 | 1.600 |
| 78 | C6615 | 2~3 | 2 | 9.900 | 19.800 | 18 | 1.600 |
| 立面总面积(㎡) | | | 642.498 | 立面平均传热系数 | | | 1.600 |

3. 东向：

东-默认立面

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 序号 | 门窗编号 | 楼层 | 数量 | 单个面积（㎡） | 总面积（㎡） | 构造编号 | 传热系数 |
| 1 |  | 1 | 2 | 3.570 | 7.140 | 65 | 1.600 |
| 2 |  | 1 | 4 | 3.360 | 13.440 | 65 | 1.600 |
| 3 |  | 1 | 1 | 17.220 | 17.220 | 65 | 1.600 |
| 4 |  | 1 | 1 | 0.420 | 0.420 | 65 | 1.600 |
| 5 |  | 1 | 1 | 1.260 | 1.260 | 65 | 1.600 |
| 6 |  | 1 | 1 | 16.590 | 16.590 | 65 | 1.600 |
| 7 |  | 1 | 1 | 21.756 | 21.756 | 65 | 1.600 |
| 8 |  | 2,4 | 2 | 20.600 | 41.200 | 65 | 1.600 |
| 9 |  | 3 | 1 | 20.000 | 20.000 | 65 | 1.600 |
| 10 |  | 3 | 2 | 1.900 | 3.800 | 65 | 1.600 |
| 11 |  | 3 | 1 | 3.420 | 3.420 | 65 | 1.600 |
| 12 | C0715 | 3 | 1 | 1.050 | 1.050 | 18 | 1.600 |
| 13 | C0915 | 1~5 | 15 | 1.350 | 20.250 | 18 | 1.600 |
| 14 | C1015 | 4~5 | 4 | 1.500 | 6.000 | 18 | 1.600 |
| 15 | C1315 | 4~5 | 21 | 1.950 | 40.950 | 18 | 1.600 |
| 16 | C1415 | 2 | 2 | 2.070 | 4.140 | 18 | 1.600 |
| 17 | C1515 | 3 | 1 | 2.250 | 2.250 | 18 | 1.600 |
| 18 | C4015 | 2 | 2 | 6.000 | 12.000 | 18 | 1.600 |
| 19 | C4515 | 2 | 1 | 6.750 | 6.750 | 18 | 1.600 |
| 20 | C6615 | 3 | 1 | 9.900 | 9.900 | 18 | 1.600 |
| 立面总面积(㎡) | | | 249.536 | 立面平均传热系数 | | | 1.600 |

4. 西向：

西-默认立面

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 序号 | 门窗编号 | 楼层 | 数量 | 单个面积（㎡） | 总面积（㎡） | 构造编号 | 传热系数 |
| 1 |  | 1 | 1 | 3.591 | 3.591 | 65 | 1.600 |
| 2 |  | 1 | 2 | 3.150 | 6.300 | 65 | 1.600 |
| 3 |  | 1 | 1 | 0.420 | 0.420 | 65 | 1.600 |
| 4 |  | 1 | 1 | 2.919 | 2.919 | 65 | 1.600 |
| 5 |  | 1 | 1 | 20.790 | 20.790 | 65 | 1.600 |
| 6 |  | 1 | 3 | 3.360 | 10.080 | 65 | 1.600 |
| 7 |  | 1 | 1 | 5.040 | 5.040 | 65 | 1.600 |
| 8 |  | 1 | 1 | 1.260 | 1.260 | 65 | 1.600 |
| 9 |  | 1 | 1 | 3.780 | 3.780 | 65 | 1.600 |
| 10 |  | 1 | 1 | 2.100 | 2.100 | 65 | 1.600 |
| 11 |  | 1 | 1 | 7.640 | 7.640 | 65 | 1.600 |
| 12 |  | 1 | 1 | 3.600 | 3.600 | 65 | 1.600 |
| 13 |  | 1 | 1 | 8.550 | 8.550 | 65 | 1.600 |
| 14 |  | 1 | 1 | 4.960 | 4.960 | 65 | 1.600 |
| 15 |  | 2 | 1 | 34.600 | 34.600 | 65 | 1.600 |
| 16 |  | 2 | 1 | 0.812 | 0.812 | 65 | 1.600 |
| 17 |  | 2 | 1 | 0.800 | 0.800 | 65 | 1.600 |
| 18 |  | 2 | 1 | 1.700 | 1.700 | 65 | 1.600 |
| 19 |  | 2 | 1 | 0.252 | 0.252 | 65 | 1.600 |
| 20 |  | 2 | 3 | 0.960 | 2.880 | 65 | 1.600 |
| 21 |  | 2 | 3 | 2.040 | 6.120 | 65 | 1.600 |
| 22 |  | 2 | 1 | 0.388 | 0.388 | 65 | 1.600 |
| 23 |  | 2 | 1 | 0.368 | 0.368 | 65 | 1.600 |
| 24 |  | 2 | 1 | 0.380 | 0.380 | 65 | 1.600 |
| 25 | C0715 | 2~4 | 8 | 1.050 | 8.400 | 18 | 1.600 |
| 26 | C0915 | 1~5 | 28 | 1.350 | 37.800 | 18 | 1.600 |
| 27 | C1015 | 2 | 1 | 1.500 | 1.500 | 18 | 1.600 |
| 28 | C1215 | 2~3 | 6 | 1.800 | 10.800 | 18 | 1.600 |
| 29 | C1315 | 2,4~5 | 13 | 1.950 | 25.350 | 18 | 1.600 |
| 30 | C1415 | 1~3 | 10 | 2.070 | 20.700 | 18 | 1.600 |
| 31 | C1515 | 2~3 | 5 | 2.250 | 11.250 | 18 | 1.600 |
| 32 | C2118 | 1 | 1 | 3.780 | 3.780 | 18 | 1.600 |
| 33 | C4515 | 1 | 1 | 6.750 | 6.750 | 18 | 1.600 |
| 立面总面积(㎡) | | | 255.660 | 立面平均传热系数 | | | 1.600 |

### 综合太阳得热系数

1. 南向：

南-默认立面

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 序号 | 门窗编号 | 楼层 | 数量 | 单个面积（㎡） | 总面积（㎡） | 构造编号 | 窗太阳得热系数 | 外遮阳编号 | 外遮阳系数(含环境遮阳) | 综合太阳得热系数 |
| 1 |  | 1 | 1 | 78.960 | 78.960 | 65 | 0.326 |  | 1.000 | 0.326 |
| 2 |  | 1 | 1 | 5.670 | 5.670 | 65 | 0.326 |  | 1.000 | 0.326 |
| 3 |  | 1 | 4 | 3.360 | 13.440 | 65 | 0.326 |  | 1.000 | 0.326 |
| 4 |  | 1 | 1 | 6.510 | 6.510 | 65 | 0.326 |  | 1.000 | 0.326 |
| 5 |  | 1 | 1 | 2.835 | 2.835 | 65 | 0.326 |  | 1.000 | 0.326 |
| 6 |  | 1 | 1 | 3.675 | 3.675 | 65 | 0.326 |  | 1.000 | 0.326 |
| 7 |  | 1 | 1 | 2.625 | 2.625 | 65 | 0.326 |  | 1.000 | 0.326 |
| 8 |  | 1 | 1 | 1.785 | 1.785 | 65 | 0.326 |  | 1.000 | 0.326 |
| 9 |  | 1 | 1 | 31.710 | 31.710 | 65 | 0.326 |  | 1.000 | 0.326 |
| 10 |  | 2 | 1 | 5.649 | 5.649 | 65 | 0.326 |  | 1.000 | 0.326 |
| 11 |  | 2 | 2 | 1.440 | 2.880 | 65 | 0.326 |  | 1.000 | 0.326 |
| 12 |  | 2 | 1 | 5.901 | 5.901 | 65 | 0.326 |  | 1.000 | 0.326 |
| 13 |  | 2 | 1 | 1.200 | 1.200 | 65 | 0.326 |  | 1.000 | 0.326 |
| 14 |  | 2 | 2 | 3.420 | 6.840 | 65 | 0.326 |  | 1.000 | 0.326 |
| 15 |  | 2 | 1 | 90.400 | 90.400 | 65 | 0.326 |  | 1.000 | 0.326 |
| 16 |  | 2 | 1 | 2.000 | 2.000 | 65 | 0.326 |  | 1.000 | 0.326 |
| 17 |  | 2 | 1 | 7.436 | 7.436 | 65 | 0.326 |  | 1.000 | 0.326 |
| 18 |  | 2 | 10 | 1.350 | 13.500 | 65 | 0.326 |  | 1.000 | 0.326 |
| 19 |  | 2 | 10 | 2.400 | 24.000 | 65 | 0.326 |  | 1.000 | 0.326 |
| 20 |  | 2 | 1 | 4.400 | 4.400 | 65 | 0.326 |  | 1.000 | 0.326 |
| 21 |  | 2 | 1 | 4.892 | 4.892 | 65 | 0.326 |  | 1.000 | 0.326 |
| 22 |  | 2 | 1 | 4.784 | 4.784 | 65 | 0.326 |  | 1.000 | 0.326 |
| 23 |  | 2 | 1 | 4.676 | 4.676 | 65 | 0.326 |  | 1.000 | 0.326 |
| 24 |  | 2 | 1 | 4.888 | 4.888 | 65 | 0.326 |  | 1.000 | 0.326 |
| 25 |  | 2 | 1 | 4.084 | 4.084 | 65 | 0.326 |  | 1.000 | 0.326 |
| 26 |  | 2 | 1 | 6.520 | 6.520 | 65 | 0.326 |  | 1.000 | 0.326 |
| 27 |  | 2 | 1 | 2.920 | 2.920 | 65 | 0.326 |  | 1.000 | 0.326 |
| 28 |  | 2 | 1 | 3.648 | 3.648 | 65 | 0.326 |  | 1.000 | 0.326 |
| 29 |  | 2 | 1 | 7.152 | 7.152 | 65 | 0.326 |  | 1.000 | 0.326 |
| 30 |  | 2 | 1 | 18.600 | 18.600 | 65 | 0.326 |  | 1.000 | 0.326 |
| 31 |  | 3 | 1 | 0.184 | 0.184 | 65 | 0.326 |  | 1.000 | 0.326 |
| 32 |  | 3 | 26 | 0.900 | 23.400 | 65 | 0.326 |  | 1.000 | 0.326 |
| 33 |  | 3 | 26 | 1.600 | 41.600 | 65 | 0.326 |  | 1.000 | 0.326 |
| 34 |  | 3 | 1 | 1.592 | 1.592 | 65 | 0.326 |  | 1.000 | 0.326 |
| 35 |  | 3 | 1 | 1.544 | 1.544 | 65 | 0.326 |  | 1.000 | 0.326 |
| 36 |  | 3 | 4 | 1.000 | 4.000 | 65 | 0.326 |  | 1.000 | 0.326 |
| 37 |  | 3 | 1 | 2.960 | 2.960 | 65 | 0.326 |  | 1.000 | 0.326 |
| 38 |  | 3 | 1 | 1.364 | 1.364 | 65 | 0.326 |  | 1.000 | 0.326 |
| 39 |  | 3 | 7 | 0.996 | 6.972 | 65 | 0.326 |  | 1.000 | 0.326 |
| 40 |  | 3 | 1 | 1.360 | 1.360 | 65 | 0.326 |  | 1.000 | 0.326 |
| 41 |  | 3 | 1 | 0.420 | 0.420 | 65 | 0.326 |  | 1.000 | 0.326 |
| 42 |  | 3 | 1 | 0.580 | 0.580 | 65 | 0.326 |  | 1.000 | 0.326 |
| 43 |  | 3 | 1 | 0.492 | 0.492 | 65 | 0.326 |  | 1.000 | 0.326 |
| 44 |  | 3 | 1 | 0.508 | 0.508 | 65 | 0.326 |  | 1.000 | 0.326 |
| 45 |  | 3 | 1 | 0.556 | 0.556 | 65 | 0.326 |  | 1.000 | 0.326 |
| 46 |  | 3 | 1 | 0.448 | 0.448 | 65 | 0.326 |  | 1.000 | 0.326 |
| 47 |  | 3 | 1 | 0.504 | 0.504 | 65 | 0.326 |  | 1.000 | 0.326 |
| 48 |  | 3 | 1 | 0.500 | 0.500 | 65 | 0.326 |  | 1.000 | 0.326 |
| 49 |  | 3 | 1 | 0.748 | 0.748 | 65 | 0.326 |  | 1.000 | 0.326 |
| 50 |  | 3 | 1 | 0.256 | 0.256 | 65 | 0.326 |  | 1.000 | 0.326 |
| 51 |  | 3 | 1 | 0.576 | 0.576 | 65 | 0.326 |  | 1.000 | 0.326 |
| 52 |  | 3 | 1 | 0.428 | 0.428 | 65 | 0.326 |  | 1.000 | 0.326 |
| 53 |  | 3 | 1 | 0.404 | 0.404 | 65 | 0.326 |  | 1.000 | 0.326 |
| 54 |  | 3 | 1 | 0.600 | 0.600 | 65 | 0.326 |  | 1.000 | 0.326 |
| 55 |  | 3 | 1 | 0.524 | 0.524 | 65 | 0.326 |  | 1.000 | 0.326 |
| 56 |  | 3 | 1 | 0.480 | 0.480 | 65 | 0.326 |  | 1.000 | 0.326 |
| 57 |  | 3 | 1 | 0.540 | 0.540 | 65 | 0.326 |  | 1.000 | 0.326 |
| 58 |  | 3 | 1 | 0.460 | 0.460 | 65 | 0.326 |  | 1.000 | 0.326 |
| 59 |  | 3 | 1 | 0.340 | 0.340 | 65 | 0.326 |  | 1.000 | 0.326 |
| 60 |  | 3 | 1 | 0.368 | 0.368 | 65 | 0.326 |  | 1.000 | 0.326 |
| 61 |  | 3 | 1 | 0.292 | 0.292 | 65 | 0.326 |  | 1.000 | 0.326 |
| 62 |  | 4 | 1 | 9.536 | 9.536 | 65 | 0.326 |  | 1.000 | 0.326 |
| 63 |  | 4 | 17 | 1.040 | 17.680 | 65 | 0.326 |  | 1.000 | 0.326 |
| 64 |  | 4 | 17 | 2.210 | 37.570 | 65 | 0.326 |  | 1.000 | 0.326 |
| 65 |  | 4 | 4 | 0.528 | 2.112 | 65 | 0.326 |  | 1.000 | 0.326 |
| 66 |  | 4 | 1 | 0.872 | 0.872 | 65 | 0.326 |  | 1.000 | 0.326 |
| 67 |  | 4 | 1 | 0.860 | 0.860 | 65 | 0.326 |  | 1.000 | 0.326 |
| 68 |  | 4 | 1 | 0.672 | 0.672 | 65 | 0.326 |  | 1.000 | 0.326 |
| 69 |  | 4 | 3 | 0.808 | 2.424 | 65 | 0.326 |  | 1.000 | 0.326 |
| 70 |  | 4 | 1 | 1.216 | 1.216 | 65 | 0.326 |  | 1.000 | 0.326 |
| 71 |  | 4 | 2 | 0.864 | 1.728 | 65 | 0.326 |  | 1.000 | 0.326 |
| 72 |  | 4 | 2 | 0.668 | 1.336 | 65 | 0.326 |  | 1.000 | 0.326 |
| 73 |  | 4 | 1 | 1.424 | 1.424 | 65 | 0.326 |  | 1.000 | 0.326 |
| 74 |  | 4 | 1 | 2.820 | 2.820 | 65 | 0.326 |  | 1.000 | 0.326 |
| 75 |  | 4 | 2 | 3.040 | 6.080 | 65 | 0.326 |  | 1.000 | 0.326 |
| 76 |  | 4 | 1 | 3.200 | 3.200 | 65 | 0.326 |  | 1.000 | 0.326 |
| 77 | C0715 | 1~2 | 16 | 1.050 | 16.800 | 18 | 0.326 |  | 1.000 | 0.326 |
| 78 | C0915 | 1~4 | 19 | 1.350 | 25.650 | 18 | 0.326 |  | 1.000 | 0.326 |
| 79 | C1015 | 3 | 26 | 1.500 | 39.000 | 18 | 0.326 |  | 1.000 | 0.326 |
| 80 | C1315 | 1~2,4~5 | 41 | 1.950 | 79.950 | 18 | 0.326 |  | 1.000 | 0.326 |
| 81 | C1515 | 2 | 14 | 2.250 | 31.500 | 18 | 0.326 |  | 1.000 | 0.326 |
| 82 | C2121 | 1~4 | 34 | 4.410 | 149.940 | 18 | 0.326 |  | 1.000 | 0.326 |
| 立面总面积(㎡) | | | | | 900.950 | 综合太阳得热系数 | | | 1.000 | 0.326 |

2. 北向：

北-默认立面

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 序号 | 门窗编号 | 楼层 | 数量 | 单个面积（㎡） | 总面积（㎡） | 构造编号 | 窗太阳得热系数 | 外遮阳编号 | 外遮阳系数(含环境遮阳) | 综合太阳得热系数 |
| 1 |  | 1 | 1 | 2.054 | 2.054 | 65 | 0.326 |  | 1.000 | 0.326 |
| 2 |  | 1 | 10 | 0.900 | 9.000 | 65 | 0.326 |  | 1.000 | 0.326 |
| 3 |  | 1 | 10 | 1.800 | 18.000 | 65 | 0.326 |  | 1.000 | 0.326 |
| 4 |  | 1 | 1 | 1.050 | 1.050 | 65 | 0.326 |  | 1.000 | 0.326 |
| 5 |  | 1 | 1 | 1.873 | 1.873 | 65 | 0.326 |  | 1.000 | 0.326 |
| 6 |  | 1 | 2 | 1.046 | 2.092 | 65 | 0.326 |  | 1.000 | 0.326 |
| 7 |  | 1 | 1 | 1.714 | 1.714 | 65 | 0.326 |  | 1.000 | 0.326 |
| 8 |  | 1 | 1 | 2.764 | 2.764 | 65 | 0.326 |  | 1.000 | 0.326 |
| 9 |  | 1 | 1 | 5.183 | 5.183 | 65 | 0.326 |  | 1.000 | 0.326 |
| 10 |  | 1 | 1 | 1.235 | 1.235 | 65 | 0.326 |  | 1.000 | 0.326 |
| 11 |  | 1 | 1 | 0.928 | 0.928 | 65 | 0.326 |  | 1.000 | 0.326 |
| 12 |  | 1 | 1 | 1.172 | 1.172 | 65 | 0.326 |  | 1.000 | 0.326 |
| 13 |  | 1 | 1 | 0.937 | 0.937 | 65 | 0.326 |  | 1.000 | 0.326 |
| 14 |  | 1 | 1 | 52.172 | 52.172 | 65 | 0.326 |  | 1.000 | 0.326 |
| 15 |  | 1 | 1 | 1.907 | 1.907 | 65 | 0.326 |  | 1.000 | 0.326 |
| 16 |  | 1 | 8 | 3.360 | 26.880 | 65 | 0.326 |  | 1.000 | 0.326 |
| 17 |  | 1 | 1 | 1.071 | 1.071 | 65 | 0.326 |  | 1.000 | 0.326 |
| 18 |  | 1 | 1 | 4.729 | 4.729 | 65 | 0.326 |  | 1.000 | 0.326 |
| 19 |  | 1 | 1 | 4.721 | 4.721 | 65 | 0.326 |  | 1.000 | 0.326 |
| 20 |  | 1 | 1 | 0.168 | 0.168 | 65 | 0.326 |  | 1.000 | 0.326 |
| 21 |  | 1 | 4 | 0.560 | 2.240 | 65 | 0.326 |  | 1.000 | 0.326 |
| 22 |  | 1 | 4 | 1.330 | 5.320 | 65 | 0.326 |  | 1.000 | 0.326 |
| 23 |  | 1 | 1 | 3.696 | 3.696 | 65 | 0.326 |  | 1.000 | 0.326 |
| 24 |  | 1,4 | 8 | 1.200 | 9.600 | 65 | 0.326 |  | 1.000 | 0.326 |
| 25 |  | 1 | 3 | 2.850 | 8.550 | 65 | 0.326 |  | 1.000 | 0.326 |
| 26 |  | 1 | 1 | 3.679 | 3.679 | 65 | 0.326 |  | 1.000 | 0.326 |
| 27 |  | 1 | 1 | 0.720 | 0.720 | 65 | 0.326 |  | 1.000 | 0.326 |
| 28 |  | 1,4 | 7 | 1.710 | 11.970 | 65 | 0.326 |  | 1.000 | 0.326 |
| 29 |  | 1 | 1 | 3.032 | 3.032 | 65 | 0.326 |  | 1.000 | 0.326 |
| 30 |  | 1 | 1 | 3.175 | 3.175 | 65 | 0.326 |  | 1.000 | 0.326 |
| 31 |  | 1 | 1 | 2.625 | 2.625 | 65 | 0.326 |  | 1.000 | 0.326 |
| 32 |  | 1 | 1 | 1.575 | 1.575 | 65 | 0.326 |  | 1.000 | 0.326 |
| 33 |  | 1 | 1 | 1.567 | 1.567 | 65 | 0.326 |  | 1.000 | 0.326 |
| 34 |  | 1 | 1 | 1.915 | 1.915 | 65 | 0.326 |  | 1.000 | 0.326 |
| 35 |  | 1 | 1 | 1.478 | 1.478 | 65 | 0.326 |  | 1.000 | 0.326 |
| 36 |  | 1 | 1 | 7.329 | 7.329 | 65 | 0.326 |  | 1.000 | 0.326 |
| 37 |  | 3 | 1 | 0.204 | 0.204 | 65 | 0.326 |  | 1.000 | 0.326 |
| 38 |  | 3 | 8 | 4.748 | 37.985 | 65 | 0.326 |  | 1.000 | 0.326 |
| 39 |  | 3 | 4 | 0.002 | 0.008 | 65 | 0.326 |  | 1.000 | 0.326 |
| 40 |  | 3 | 4 | 4.750 | 19.000 | 65 | 0.326 |  | 1.000 | 0.326 |
| 41 |  | 3 | 1 | 2.404 | 2.404 | 65 | 0.326 |  | 1.000 | 0.326 |
| 42 |  | 3 | 1 | 2.304 | 2.304 | 65 | 0.326 |  | 1.000 | 0.326 |
| 43 |  | 3 | 1 | 2.504 | 2.504 | 65 | 0.326 |  | 1.000 | 0.326 |
| 44 |  | 3 | 1 | 0.800 | 0.800 | 65 | 0.326 |  | 1.000 | 0.326 |
| 45 |  | 3 | 1 | 11.600 | 11.600 | 65 | 0.326 |  | 1.000 | 0.326 |
| 46 |  | 3 | 2 | 8.600 | 17.200 | 65 | 0.326 |  | 1.000 | 0.326 |
| 47 |  | 3 | 2 | 3.040 | 6.080 | 65 | 0.326 |  | 1.000 | 0.326 |
| 48 |  | 4 | 1 | 2.792 | 2.792 | 65 | 0.326 |  | 1.000 | 0.326 |
| 49 |  | 4 | 6 | 0.990 | 5.940 | 65 | 0.326 |  | 1.000 | 0.326 |
| 50 |  | 4 | 6 | 1.100 | 6.600 | 65 | 0.326 |  | 1.000 | 0.326 |
| 51 |  | 4 | 1 | 4.208 | 4.208 | 65 | 0.326 |  | 1.000 | 0.326 |
| 52 |  | 4 | 1 | 3.112 | 3.112 | 65 | 0.326 |  | 1.000 | 0.326 |
| 53 |  | 4 | 1 | 4.288 | 4.288 | 65 | 0.326 |  | 1.000 | 0.326 |
| 54 |  | 4 | 1 | 1.600 | 1.600 | 65 | 0.326 |  | 1.000 | 0.326 |
| 55 |  | 4 | 1 | 3.240 | 3.240 | 65 | 0.326 |  | 1.000 | 0.326 |
| 56 |  | 4 | 1 | 4.560 | 4.560 | 65 | 0.326 |  | 1.000 | 0.326 |
| 57 |  | 4 | 1 | 2.908 | 2.908 | 65 | 0.326 |  | 1.000 | 0.326 |
| 58 |  | 4 | 1 | 3.292 | 3.292 | 65 | 0.326 |  | 1.000 | 0.326 |
| 59 |  | 4 | 1 | 2.492 | 2.492 | 65 | 0.326 |  | 1.000 | 0.326 |
| 60 |  | 4 | 1 | 4.508 | 4.508 | 65 | 0.326 |  | 1.000 | 0.326 |
| 61 |  | 4 | 1 | 2.796 | 2.796 | 65 | 0.326 |  | 1.000 | 0.326 |
| 62 |  | 4 | 1 | 3.404 | 3.404 | 65 | 0.326 |  | 1.000 | 0.326 |
| 63 | C0715 | 1~2 | 8 | 1.050 | 8.400 | 18 | 0.326 |  | 1.000 | 0.326 |
| 64 | C0915 | 1~4 | 20 | 1.350 | 27.000 | 18 | 0.326 |  | 1.000 | 0.326 |
| 65 | C0921 | 2 | 4 | 1.890 | 7.560 | 18 | 0.326 |  | 1.000 | 0.326 |
| 66 | C1015 | 1 | 10 | 1.500 | 15.000 | 18 | 0.326 |  | 1.000 | 0.326 |
| 67 | C1021 | 2 | 2 | 2.100 | 4.200 | 18 | 0.326 |  | 1.000 | 0.326 |
| 68 | C1121 | 4 | 6 | 2.310 | 13.860 | 18 | 0.326 |  | 1.000 | 0.326 |
| 69 | C1215 | 1,3 | 20 | 1.800 | 36.000 | 18 | 0.326 |  | 1.000 | 0.326 |
| 70 | C1221 | 2 | 2 | 2.520 | 5.040 | 18 | 0.326 |  | 1.000 | 0.326 |
| 71 | C1315 | 1,4~5 | 16 | 1.950 | 31.200 | 18 | 0.326 |  | 1.000 | 0.326 |
| 72 | C1515 | 1~2 | 19 | 2.250 | 42.750 | 18 | 0.326 |  | 1.000 | 0.326 |
| 73 | C1521 | 1 | 4 | 3.150 | 12.600 | 18 | 0.326 |  | 1.000 | 0.326 |
| 74 | C2121 | 2 | 9 | 4.410 | 39.690 | 18 | 0.326 |  | 1.000 | 0.326 |
| 75 | C2715 | 3 | 1 | 4.050 | 4.050 | 18 | 0.326 |  | 1.000 | 0.326 |
| 76 | C3615 | 2 | 1 | 5.400 | 5.400 | 18 | 0.326 |  | 1.000 | 0.326 |
| 77 | C4015 | 3 | 1 | 6.000 | 6.000 | 18 | 0.326 |  | 1.000 | 0.326 |
| 78 | C6615 | 2~3 | 2 | 9.900 | 19.800 | 18 | 0.326 |  | 1.000 | 0.326 |
| 立面总面积(㎡) | | | | | 642.498 | 综合太阳得热系数 | | | 1.000 | 0.326 |

3. 东向：

东-默认立面

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 序号 | 门窗编号 | 楼层 | 数量 | 单个面积（㎡） | 总面积（㎡） | 构造编号 | 窗太阳得热系数 | 外遮阳编号 | 外遮阳系数(含环境遮阳) | 综合太阳得热系数 |
| 1 |  | 1 | 2 | 3.570 | 7.140 | 65 | 0.326 |  | 1.000 | 0.326 |
| 2 |  | 1 | 4 | 3.360 | 13.440 | 65 | 0.326 |  | 1.000 | 0.326 |
| 3 |  | 1 | 1 | 17.220 | 17.220 | 65 | 0.326 |  | 1.000 | 0.326 |
| 4 |  | 1 | 1 | 0.420 | 0.420 | 65 | 0.326 |  | 1.000 | 0.326 |
| 5 |  | 1 | 1 | 1.260 | 1.260 | 65 | 0.326 |  | 1.000 | 0.326 |
| 6 |  | 1 | 1 | 16.590 | 16.590 | 65 | 0.326 |  | 1.000 | 0.326 |
| 7 |  | 1 | 1 | 21.756 | 21.756 | 65 | 0.326 |  | 1.000 | 0.326 |
| 8 |  | 2,4 | 2 | 20.600 | 41.200 | 65 | 0.326 |  | 1.000 | 0.326 |
| 9 |  | 3 | 1 | 20.000 | 20.000 | 65 | 0.326 |  | 1.000 | 0.326 |
| 10 |  | 3 | 2 | 1.900 | 3.800 | 65 | 0.326 |  | 1.000 | 0.326 |
| 11 |  | 3 | 1 | 3.420 | 3.420 | 65 | 0.326 |  | 1.000 | 0.326 |
| 12 | C0715 | 3 | 1 | 1.050 | 1.050 | 18 | 0.326 |  | 1.000 | 0.326 |
| 13 | C0915 | 1~5 | 15 | 1.350 | 20.250 | 18 | 0.326 |  | 1.000 | 0.326 |
| 14 | C1015 | 4~5 | 4 | 1.500 | 6.000 | 18 | 0.326 |  | 1.000 | 0.326 |
| 15 | C1315 | 4~5 | 21 | 1.950 | 40.950 | 18 | 0.326 |  | 1.000 | 0.326 |
| 16 | C1415 | 2 | 2 | 2.070 | 4.140 | 18 | 0.326 |  | 1.000 | 0.326 |
| 17 | C1515 | 3 | 1 | 2.250 | 2.250 | 18 | 0.326 |  | 1.000 | 0.326 |
| 18 | C4015 | 2 | 2 | 6.000 | 12.000 | 18 | 0.326 |  | 1.000 | 0.326 |
| 19 | C4515 | 2 | 1 | 6.750 | 6.750 | 18 | 0.326 |  | 1.000 | 0.326 |
| 20 | C6615 | 3 | 1 | 9.900 | 9.900 | 18 | 0.326 |  | 1.000 | 0.326 |
| 立面总面积(㎡) | | | | | 249.536 | 综合太阳得热系数 | | | 1.000 | 0.326 |

4. 西向：

西-默认立面

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 序号 | 门窗编号 | 楼层 | 数量 | 单个面积（㎡） | 总面积（㎡） | 构造编号 | 窗太阳得热系数 | 外遮阳编号 | 外遮阳系数(含环境遮阳) | 综合太阳得热系数 |
| 1 |  | 1 | 1 | 3.591 | 3.591 | 65 | 0.326 |  | 1.000 | 0.326 |
| 2 |  | 1 | 2 | 3.150 | 6.300 | 65 | 0.326 |  | 1.000 | 0.326 |
| 3 |  | 1 | 1 | 0.420 | 0.420 | 65 | 0.326 |  | 1.000 | 0.326 |
| 4 |  | 1 | 1 | 2.919 | 2.919 | 65 | 0.326 |  | 1.000 | 0.326 |
| 5 |  | 1 | 1 | 20.790 | 20.790 | 65 | 0.326 |  | 1.000 | 0.326 |
| 6 |  | 1 | 3 | 3.360 | 10.080 | 65 | 0.326 |  | 1.000 | 0.326 |
| 7 |  | 1 | 1 | 5.040 | 5.040 | 65 | 0.326 |  | 1.000 | 0.326 |
| 8 |  | 1 | 1 | 1.260 | 1.260 | 65 | 0.326 |  | 1.000 | 0.326 |
| 9 |  | 1 | 1 | 3.780 | 3.780 | 65 | 0.326 |  | 1.000 | 0.326 |
| 10 |  | 1 | 1 | 2.100 | 2.100 | 65 | 0.326 |  | 1.000 | 0.326 |
| 11 |  | 1 | 1 | 7.640 | 7.640 | 65 | 0.326 |  | 1.000 | 0.326 |
| 12 |  | 1 | 1 | 3.600 | 3.600 | 65 | 0.326 |  | 1.000 | 0.326 |
| 13 |  | 1 | 1 | 8.550 | 8.550 | 65 | 0.326 |  | 1.000 | 0.326 |
| 14 |  | 1 | 1 | 4.960 | 4.960 | 65 | 0.326 |  | 1.000 | 0.326 |
| 15 |  | 2 | 1 | 34.600 | 34.600 | 65 | 0.326 |  | 1.000 | 0.326 |
| 16 |  | 2 | 1 | 0.812 | 0.812 | 65 | 0.326 |  | 1.000 | 0.326 |
| 17 |  | 2 | 1 | 0.800 | 0.800 | 65 | 0.326 |  | 1.000 | 0.326 |
| 18 |  | 2 | 1 | 1.700 | 1.700 | 65 | 0.326 |  | 1.000 | 0.326 |
| 19 |  | 2 | 1 | 0.252 | 0.252 | 65 | 0.326 |  | 1.000 | 0.326 |
| 20 |  | 2 | 3 | 0.960 | 2.880 | 65 | 0.326 |  | 1.000 | 0.326 |
| 21 |  | 2 | 3 | 2.040 | 6.120 | 65 | 0.326 |  | 1.000 | 0.326 |
| 22 |  | 2 | 1 | 0.388 | 0.388 | 65 | 0.326 |  | 1.000 | 0.326 |
| 23 |  | 2 | 1 | 0.368 | 0.368 | 65 | 0.326 |  | 1.000 | 0.326 |
| 24 |  | 2 | 1 | 0.380 | 0.380 | 65 | 0.326 |  | 1.000 | 0.326 |
| 25 | C0715 | 2~4 | 8 | 1.050 | 8.400 | 18 | 0.326 |  | 1.000 | 0.326 |
| 26 | C0915 | 1~5 | 28 | 1.350 | 37.800 | 18 | 0.326 |  | 1.000 | 0.326 |
| 27 | C1015 | 2 | 1 | 1.500 | 1.500 | 18 | 0.326 |  | 1.000 | 0.326 |
| 28 | C1215 | 2~3 | 6 | 1.800 | 10.800 | 18 | 0.326 |  | 1.000 | 0.326 |
| 29 | C1315 | 2,4~5 | 13 | 1.950 | 25.350 | 18 | 0.326 |  | 1.000 | 0.326 |
| 30 | C1415 | 1~3 | 10 | 2.070 | 20.700 | 18 | 0.326 |  | 1.000 | 0.326 |
| 31 | C1515 | 2~3 | 5 | 2.250 | 11.250 | 18 | 0.326 |  | 1.000 | 0.326 |
| 32 | C2118 | 1 | 1 | 3.780 | 3.780 | 18 | 0.326 |  | 1.000 | 0.326 |
| 33 | C4515 | 1 | 1 | 6.750 | 6.750 | 18 | 0.326 |  | 1.000 | 0.326 |
| 立面总面积(㎡) | | | | | 255.660 | 综合太阳得热系数 | | | 1.000 | 0.326 |

### 总体热工性能

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 朝向 | 立面 | 面积 | 传热系数 | 综合太阳得热系数 | 窗墙比 | 标准要求 | 结论 |
| 南向 | 南-默认立面 | 900.95 | 1.60 | 0.33 | 0.47 | K≤2.40, SHGC≤0.35 | 满足 |
| 北向 | 北-默认立面 | 642.50 | 1.60 | 0.33 | 0.33 | K≤2.60, SHGC≤0.44 | 满足 |
| 东向 | 东-默认立面 | 249.54 | 1.60 | 0.33 | 0.22 | K≤3.00, SHGC≤0.44 | 满足 |
| 西向 | 西-默认立面 | 255.66 | 1.60 | 0.33 | 0.22 | K≤3.00, SHGC≤0.44 | 满足 |
| 综合平均 |  | 2048.64 | 1.60 | 0.33 | 0.33 |  |  |
| 标准依据 | 《公共建筑节能设计标准》(GB50189-2015)第3.3.1条 | | | | | | |
| 标准要求 | 外窗传热系数和综合太阳得热系数满足表3.3.1-4的要求 | | | | | | |
| 结论 | 满足 | | | | | | |

注：本表所统计的外窗包含凸窗。

## 有效通风换气面积

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 楼层 | 房间编号 | 房间面积（㎡） | | 立面面积（㎡） | 门窗编号 | 门窗面积（㎡） | 有效通风面积比 | 门窗类型 | 有效通风面积/外窗面积 | 有效通风面积/立面面积 | 结论 |
| 1 | 1005 | 25.00 | | 55.44 | 未编号 | 2.63 | 0.30 | 幕墙 | － | 0.06 | 不适宜 |
| 未编号 | 3.36 | 0.30 | 幕墙 |
| 未编号 | 3.36 | 0.30 | 幕墙 |
| 未编号 | 1.79 | 0.30 | 幕墙 |
| 1017 | 42.60 | | 82.95 | C1515 | 2.25 | 0.50 | 外窗 | 0.43 | 0.05 | 不适宜 |
| C1515 | 2.25 | 0.50 | 外窗 |
| C1515 | 2.25 | 0.50 | 外窗 |
| C2118 | 3.78 | 0.30 | 外窗 |
| 1018 | 40.82 | | 56.28 | C1415 | 2.07 | 0.50 | 外窗 | 0.83 | 0.09 | 不适宜 |
| C0715 | 1.05 | 1.00 | 外窗 |
| C0715 | 1.05 | 1.00 | 外窗 |
| C0715 | 1.05 | 1.00 | 外窗 |
| C0715 | 1.05 | 1.00 | 外窗 |
| 1022 | 23.30 | | 81.69 | C0715 | 1.05 | 1.00 | 外窗 | 0.76 | 0.04 | 不适宜 |
| C1515 | 2.25 | 0.50 | 外窗 |
| C0915 | 1.35 | 1.00 | 外窗 |
| 1023 | 23.19 | | 18.69 | C1315 | 1.95 | 0.50 | 外窗 | 0.50 | 0.05 | 不适宜 |
| 1025 | 23.37 | | 12.81 | C1315 | 1.95 | 0.50 | 外窗 | 0.50 | 0.08 | 不适宜 |
| 1027 | 20.33 | | 17.01 | C2121 | 4.41 | 0.30 | 外窗 | 0.30 | 0.08 | 不适宜 |
| 1028 | 20.33 | | 17.01 | C2121 | 4.41 | 0.30 | 外窗 | 0.30 | 0.08 | 不适宜 |
| 1029 | 19.35 | | 16.17 | C2121 | 4.41 | 0.30 | 外窗 | 0.30 | 0.08 | 不适宜 |
| 1030 | 19.35 | | 23.10 | C2121 | 4.41 | 0.30 | 外窗 | 0.30 | 0.06 | 不适宜 |
| 1032 | 16.29 | | 53.34 | C1415 | 2.07 | 0.50 | 外窗 | 0.62 | 0.06 | 不适宜 |
| C1415 | 2.07 | 0.50 | 外窗 |
| C0915 | 1.35 | 1.00 | 外窗 |
| 1035 | 13.77 | | 53.34 | C0915 | 1.35 | 1.00 | 外窗 | 1.00 | 0.05 | 不适宜 |
| C0915 | 1.35 | 1.00 | 外窗 |
| 1038 | 7.76 | | 17.64 | C1315 | 1.95 | 0.50 | 外窗 | 0.50 | 0.06 | 不适宜 |
| 2 | 2001 | 47.69 | | 16.80 | C1315 | 1.95 | 0.50 | 外窗 | 0.50 | 0.06 | 不适宜 |
| 2016 | 45.26 | | 57.20 | C2121 | 4.41 | 0.30 | 外窗 | 0.30 | 0.07 | 不适宜 |
| C2121 | 4.41 | 0.30 | 外窗 |
| C2121 | 4.41 | 0.30 | 外窗 |
| 2017 | 20.33 | | 16.20 | C2121 | 4.41 | 0.30 | 外窗 | 0.30 | 0.08 | 不适宜 |
| 2018 | 19.35 | | 15.40 | C2121 | 4.41 | 0.30 | 外窗 | 0.30 | 0.09 | 不适宜 |
| 2022 | 47.87 | | 16.80 | C1315 | 1.95 | 0.50 | 外窗 | 0.50 | 0.06 | 不适宜 |
| 2025 | 26.49 | | 47.60 | C0915 | 1.35 | 1.00 | 外窗 | 0.46 | 0.06 | 不适宜 |
| C2121 | 4.41 | 0.30 | 外窗 |
| 2029 | 22.84 | | 31.60 | C0915 | 1.35 | 1.00 | 外窗 | 1.00 | 0.09 | 不适宜 |
| C0915 | 1.35 | 1.00 | 外窗 |
| 2030 | 20.33 | | 16.20 | C2121 | 4.41 | 0.30 | 外窗 | 0.30 | 0.08 | 不适宜 |
| 2031 | 19.35 | | 15.40 | C2121 | 4.41 | 0.30 | 外窗 | 0.30 | 0.09 | 不适宜 |
| 2032 | 16.29 | | 44.60 | C1415 | 2.07 | 0.50 | 外窗 | 0.62 | 0.08 | 不适宜 |
| C1415 | 2.07 | 0.50 | 外窗 |
| C0915 | 1.35 | 1.00 | 外窗 |
| 2038 | 7.76 | | 24.80 | C0915 | 1.35 | 1.00 | 外窗 | 1.00 | 0.05 | 不适宜 |
| 2045 | 4.06 | | 18.40 | C1515 | 2.25 | 0.50 | 外窗 | 0.50 | 0.06 | 不适宜 |
| 3 | 3004 | 105.22 | | 104.52 | C6615 | 9.90 | 0.50 | 外窗 | 0.50 | 0.05 | 不适宜 |
| 3009 | 63.68 | | 97.39 | C2715 | 4.05 | 0.60 | 外窗 | 0.83 | 0.08 | 不适宜 |
| C1215 | 1.80 | 1.00 | 外窗 |
| C1215 | 1.80 | 1.00 | 外窗 |
| C1215 | 1.80 | 1.00 | 外窗 |
| 3012 | 20.33 | | 16.20 | C2121 | 4.41 | 0.30 | 外窗 | 0.30 | 0.08 | 不适宜 |
| 3014 | 33.09 | | 49.40 | C1215 | 1.80 | 1.00 | 外窗 | 1.00 | 0.07 | 不适宜 |
| C1215 | 1.80 | 1.00 | 外窗 |
| 3016 | 26.49 | | 47.60 | C0915 | 1.35 | 1.00 | 外窗 | 0.46 | 0.06 | 不适宜 |
| C2121 | 4.41 | 0.30 | 外窗 |
| 3017 | 25.42 | | 32.60 | C1215 | 1.80 | 1.00 | 外窗 | 1.00 | 0.06 | 不适宜 |
| 3018 | 23.29 | | 58.73 | C0915 | 1.35 | 1.00 | 外窗 | 1.00 | 0.02 | 不适宜 |
| 3020 | 22.92 | | 31.60 | C0915 | 1.35 | 1.00 | 外窗 | 1.00 | 0.09 | 不适宜 |
| C0915 | 1.35 | 1.00 | 外窗 |
| 3021 | 22.90 | | 40.20 | C2121 | 4.41 | 0.30 | 外窗 | 0.30 | 0.03 | 不适宜 |
| 3022 | 20.33 | | 16.20 | C2121 | 4.41 | 0.30 | 外窗 | 0.30 | 0.08 | 不适宜 |
| 3023 | 20.33 | | 16.20 | C2121 | 4.41 | 0.30 | 外窗 | 0.30 | 0.08 | 不适宜 |
| 3024 | 19.35 | | 15.40 | C2121 | 4.41 | 0.30 | 外窗 | 0.30 | 0.09 | 不适宜 |
| 3025 | 16.29 | | 44.60 | C1415 | 2.07 | 0.50 | 外窗 | 0.62 | 0.08 | 不适宜 |
| C1415 | 2.07 | 0.50 | 外窗 |
| C0915 | 1.35 | 1.00 | 外窗 |
| 3029 | 8.54 | | 25.20 | C0915 | 1.35 | 1.00 | 外窗 | 1.00 | 0.05 | 不适宜 |
| 3037 | 20.33 | | 16.20 | C2121 | 4.41 | 0.30 | 外窗 | 0.30 | 0.08 | 不适宜 |
| 3040 | 50.14 | | 58.47 | C1515 | 2.25 | 0.50 | 外窗 | 0.50 | 0.08 | 不适宜 |
| C1515 | 2.25 | 0.50 | 外窗 |
| C1515 | 2.25 | 0.50 | 外窗 |
| C1515 | 2.25 | 0.50 | 外窗 |
| 4 | 4005 | 22.90 | | 40.20 | C2121 | 4.41 | 0.30 | 外窗 | 0.30 | 0.03 | 不适宜 |
| 4007 | 20.33 | | 16.20 | C2121 | 4.41 | 0.30 | 外窗 | 0.30 | 0.08 | 不适宜 |
| 4009 | 26.49 | | 47.60 | C0915 | 1.35 | 1.00 | 外窗 | 1.00 | 0.06 | 不适宜 |
| C0915 | 1.35 | 1.00 | 外窗 |
| 4010 | 22.92 | | 44.40 | C0915 | 1.35 | 1.00 | 外窗 | 1.00 | 0.06 | 不适宜 |
| C0915 | 1.35 | 1.00 | 外窗 |
| 4017 | 20.33 | | 16.20 | C2121 | 4.41 | 0.30 | 外窗 | 0.30 | 0.08 | 不适宜 |
| 4020 | 17.44 | | 26.40 | C0915 | 1.35 | 1.00 | 外窗 | 1.00 | 0.05 | 不适宜 |
| 4023 | 10.68 | | 27.80 | C1315 | 1.95 | 0.50 | 外窗 | 0.50 | 0.04 | 不适宜 |
| 4024 | 10.70 | | 13.40 | C1315 | 1.95 | 0.50 | 外窗 | 0.50 | 0.07 | 不适宜 |
| 4032 | 19.35 | | 15.40 | C2121 | 4.41 | 0.30 | 外窗 | 0.30 | 0.09 | 不适宜 |
| 5 | 5003 | 17.44 | | 26.40 | C0915 | 1.35 | 1.00 | 外窗 | 1.00 | 0.05 | 不适宜 |
| 5004 | 10.68 | | 27.80 | C1315 | 1.95 | 0.50 | 外窗 | 0.50 | 0.04 | 不适宜 |
| 5005 | 10.70 | | 13.40 | C1315 | 1.95 | 0.50 | 外窗 | 0.50 | 0.07 | 不适宜 |
| 5009 | 61.11 | | 31.00 | C1315 | 1.95 | 0.50 | 外窗 | 0.50 | 0.06 | 不适宜 |
| C1315 | 1.95 | 0.50 | 外窗 |
| 通风换气装置 | | | 有 | | | | | | | | |
| 标准依据 | | | 《公共建筑节能设计标准》(GB50189-2015)第3.2.8条 | | | | | | | | |
| 标准要求 | | | 甲类建筑外窗有效通风换气面积不宜小于所在房间立面面积的10% | | | | | | | | |
| 结论 | | | 满足 | | | | | | | | |

注：达标时只列出一项，不达标时列出全部不达标项

## 非中空窗面积比

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 朝向 | 立面 | 非中空玻璃面积(㎡) | 透光面积(㎡) | 非中空面积比 | 限值 | 结论 |
| 南向 | 南-默认立面 | 0.00 | 900.95 | 0.00 | 0.15 | 满足 |
| 北向 | 北-默认立面 | 0.00 | 642.50 | 0.00 | 0.15 | 满足 |
| 东向 | 东-默认立面 | 0.00 | 249.54 | 0.00 | 0.15 | 满足 |
| 西向 | 西-默认立面 | 0.00 | 255.66 | 0.00 | 0.15 | 满足 |
| 《标准》依据 | | 《公共建筑节能设计标准》(GB50189-2015)第3.3.7条 | | | | |
| 标准要求 | | 非中空玻璃的面积不应超过同一立面透光面积的15% | | | | |
| 结论 | | 满足 | | | | |

## 外窗气密性

|  |  |  |
| --- | --- | --- |
| 层数 | 1～9层 | 10层以上 |
| 最不利气密性等级 | 7级 C0715 | － |
| 外窗气密性措施 |  |  |
| 标准依据 | 《公共建筑节能设计标准》(GB50189-2015)第3.3.5条，分级与检测方法《建筑外门窗气密、水密、抗风压性能分级及检测方法》（GB/T 7106-2008） | 《公共建筑节能设计标准》(GB50189-2015)第3.3.5条，分级与检测方法《建筑外门窗气密、水密、抗风压性能分级及检测方法》（GB/T 7106-2008） |
| 标准要求 | 10层以下外窗气密性不应低于《建筑外门窗气密、水密、抗风压性能分级及检测方法》（GB/T 7106-2008）的6级 | 10层及以上外窗气密性不应低于《建筑外门窗气密、水密、抗风压性能分级及检测方法》（GB/T 7106-2008）的7级 |
| 结论 | 满足 | － |

## 幕墙气密性

|  |  |
| --- | --- |
| 最不利气密性等级 | 4级 |
| 幕墙气密性措施 |  |
| 通风换气装置 | 有 |
| 标准依据 | 《公共建筑节能设计标准》(GB50189-2015)第3.3.6条，《建筑幕墙》（GB/T 21086-2007） |
| 标准要求 | 幕墙气密性不应低于《建筑幕墙》（GB/T 21086-2007）的3级，即《建筑幕墙物理性能分级》(GB/T15225-94)的3级 |
| 结论 | 满足 |

## 规定性指标检查结论

|  |  |  |  |
| --- | --- | --- | --- |
| 序号 | 检查项 | 结论 | 可否性能权衡 |
| 1 | 窗墙比 | 适宜 |  |
| 2 | 可见光透射比 | 满足 |  |
| 3 | 天窗屋顶比 | 满足 |  |
| 4 | 天窗类型 | 满足 |  |
| 5 | 屋顶构造 | 满足 |  |
| 6 | 外墙构造 | 满足 |  |
| 7 | 挑空楼板构造 | 满足 |  |
| 8 | 外窗热工 | 满足 |  |
| 9 | 有效通风换气面积 | 满足 |  |
| 10 | 非中空窗面积比 | 满足 |  |
| 11 | 外窗气密性 | 满足 |  |
| 12 | 幕墙气密性 | 满足 |  |
| 结论 | | 满足 |  |

□说明：本工程所有规定性设计指标**满足**《公共建筑节能设计标准》》(GB50189-2015)的要求。