CLIMETRY PRO REPORT

# Engineering Environmental Exposure Report

Engineering screening report for 1.35210, 103.81980

**CE-5**

**TROPICAL MARINE EXPOSURE**
Climetry-derived environmental severity class. Not an ISO C1-CX corrosivity class and not a failure probability.
Comparative basis: Global ERA5 grid locations, including land and ocean.

| | |
|---|---|
| Exposure Class<br>**CE-5 - Tropical marine exposure** | Climate Type<br>**Humid Tropical** |
| Data Basis<br>**Climetry Environmental Year (CEY)** | Representative Period<br>**CEY5 pilot, 2015-2019, 12 representative months** |

CE-5 summarizes the overall environmental severity for this deployment location. The following pages separate the executive assessment, dominant load mechanisms and technical evidence.

## 01 Executive Summary

| | |
|---|---|
| **CE-5** | **TROPICAL MARINE EXPOSURE**<br>Primary stressor: Corrosion<br>Secondary stressor: Humidity<br>CE classes indicate environmental severity and qualification relevance, not failure probability. |

| | | |
|---|---|---|
| CE Class<br>**CE-5** | Climate Type<br>**Humid Tropical** | Data Basis<br>**Climetry Environmental Year (CEY)** |
| Representative Period<br>**CEY5 pilot, 2015-2019, 12 representative months** | Confidence<br>**ERA5 compared with station observations** | Location<br>**1.35210, 103.81980** |

| | | |
|---|---|---|
| **EXECUTIVE SUMMARY** | **Climetry Exposure Class (CE):** CE-5<br>**Primary Stressor:** Corrosion<br>**Secondary Stressor:** Humidity<br>CE is not an ISO corrosivity class. | **Design Considerations**<br>Corrosion protection<br>Moisture management<br>Condensation control |

### Top Design Considerations

| | | |
|---|---|---|
| Focus 1<br>**Corrosion protection** | Focus 2<br>**Moisture management** | Focus 3<br>**Condensation control** |

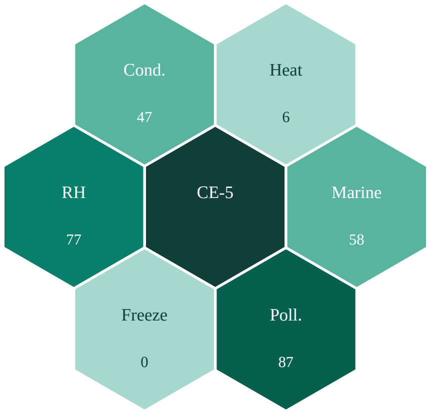
This report summarizes environmental severity for durability screening. It converts climate and atmospheric context into engineering-readable exposure mechanisms; it does not predict product failure probability.

# 02 Engineering Climate Fingerprint(TM)

The Engineering Climate Fingerprint summarizes the dominant environmental load mechanisms relevant for product qualification.

Fingerprint dimensions: darker green = stronger load

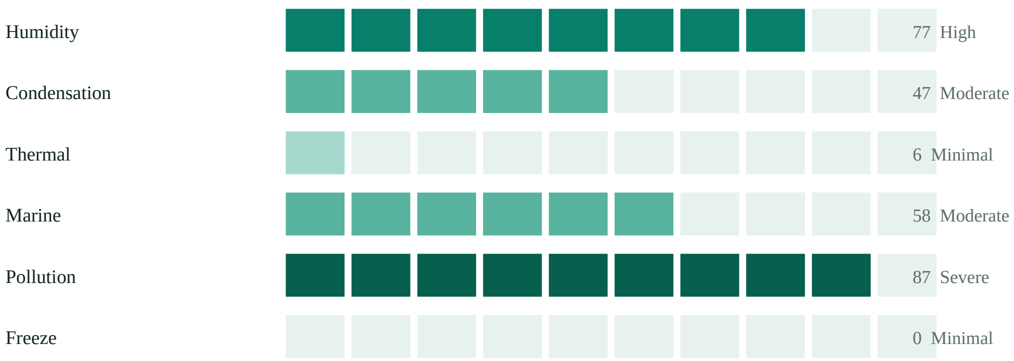
CE-5




## Engineering Climate Fingerprint(TM)

Pattern

Engineering Climate Fingerprint v0.1




Pollution is the dominant fingerprint dimension, followed by Humidity. Use the pattern to compare deployment locations and identify which environment...

Scores indicate environmental load intensity for screening, not failure probability.

| | |
|---|---|
| **Executive narrative** | This location is dominated by pollution and humidity-driven exposure. Freeze and Thermal are minor concerns in this screening assessment. |
| **Dominant load** | Pollution (Severe) |
| **Secondary load** | Humidity (High) |
| **Minor loads** | Freeze and Thermal |

# 03 Engineering Interpretation

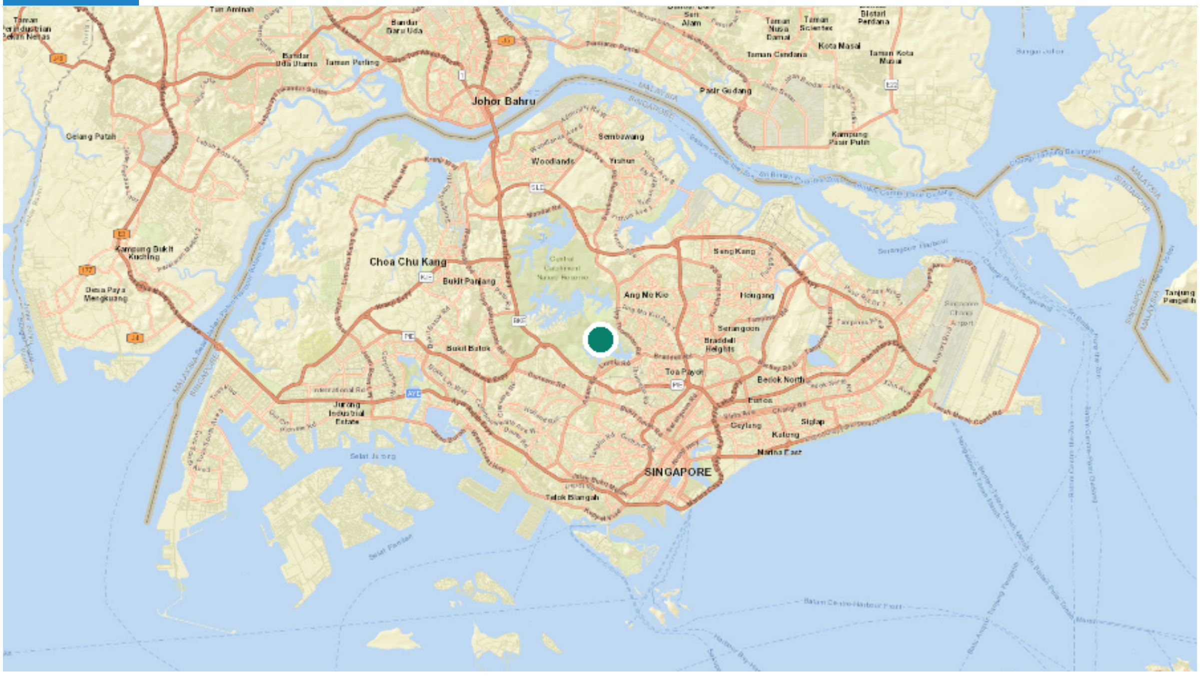
This section translates the exposure pattern into an engineering assessment. It is intentionally general and must be checked against the product architecture, enclosure design, materials and duty cycle.

| Strengths | Risks | Qualification Focus |
|---|---|---|
| - No freezing exposure<br>- Stable temperatures<br>- Low thermal cycling | - Corrosion dominates the exposure pattern<br>- RH80 exposure: 5,617 h<br>- Corrosion exposure percentile: 99th<br>- Atmospheric modifier: Severe | - Corrosion protection<br>- Moisture management<br>- Condensation control<br>- Use the monthly profile to select representative hot-humid and condensation-prone qualification conditions.<br>- Confirm enclosure, coating, connector, and drainage performance using product-specific acceptance criteria. |

| Mechanism | Severity | Engineering interpretation |
|---|---|---|
| **Heat** | Low | High-temperature dwell and derating relevance. |
| **Humidity** | High | Moisture uptake and humidity-driven degradation relevance. |
| **Condensation** | Moderate | Small dew-point margins and wet-surface potential. |
| **Marine influence** | Moderate | Marine aerosol / coastline context: Moderate. |
| **Thermal cycling** | Low | Daily and seasonal temperature variation relevance. |

| Layer | Meaning |
|---|---|
| Environmental severity (CE) | Overall location severity for durability and qualification relevance. |
| Specific exposure mechanisms | Humidity, condensation, heat, freeze, thermal cycling, marine influence and pollution context. |
| Material-related corrosivity indicators | ISO-derived steel and aluminum atmospheric corrosivity indicators. |
| Engineering interpretation | General screening implications; not failure probability, certification or service-life prediction. |

# 04 Location Overview



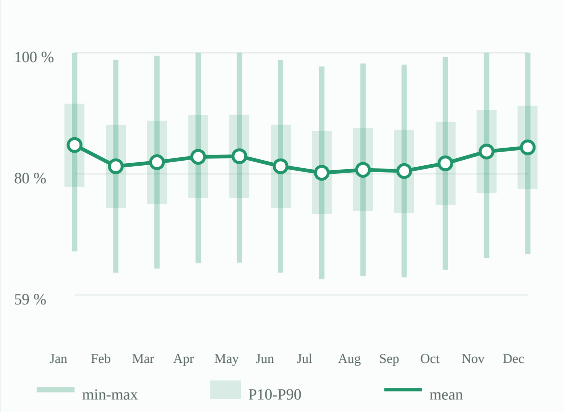

Map context: Esri World Street Map. Selected location: 1.35210, 103.81980.

| | |
|---|---|
| Location<br>**1.35210, 103.81980** | Climate Zone<br>**Humid Tropical** |
| Distance to Coast<br>**8.7 km (5-20 km)** | Marine Exposure<br>**55/100** |

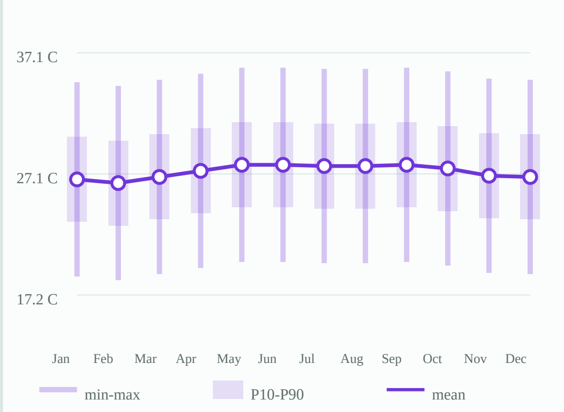
# 05 Climate Characteristics

Thermodynamic variables describe the physical environment seen by products before material or design-specific limits are applied. Each panel shows a monthly screening envelope, P10-P90 band and monthly mean.

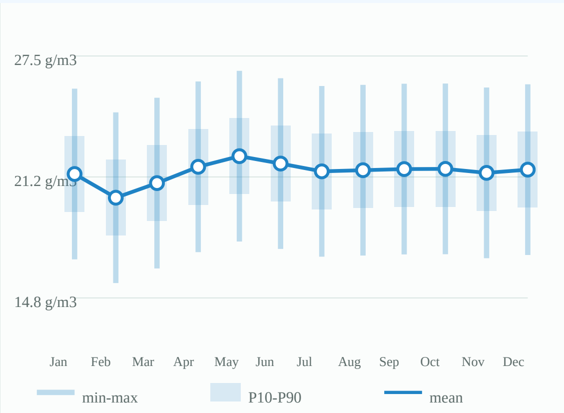
Relative humidity 84 %



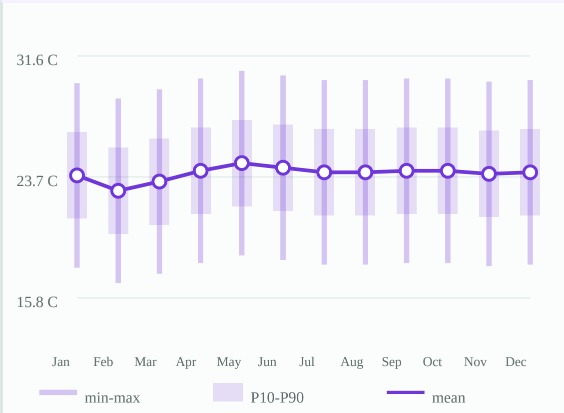

Air temperature 26.9 C




Absolute humidity 21.5 g/m3




Dew point 24.0 C

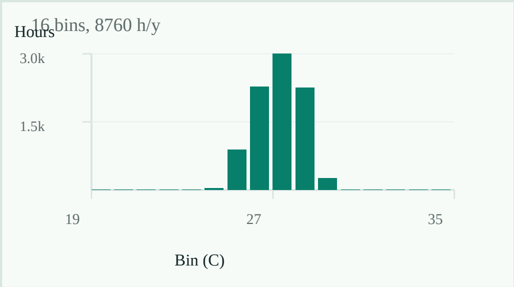


# 06 Engineering Climate Statistics

This section converts representative CEY values into engineering diagrams. Duration histograms, paired thermodynamic density, cycle statistics and high-risk weeks are screening inputs for design review and qualification planning. If a customer location has no hourly CEY yet, professional placeholders remain visible without fabricating data.

### Engineering Temperature Duration Distribution

Annual exposure hours by air-temperature bin. Useful for thermal design, heating/cooling assessment and electronics reliability screening.

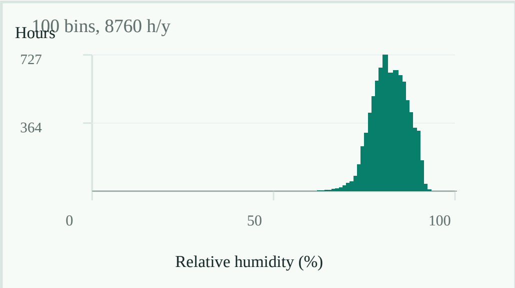



16 duration bins prepared.

**Why this matters**
Engineering Temperature Duration Distribution: the CEY distribution spans approximately P05 25.7 C, P50 27.4 C and P95 28.9 C. The percentile spread is intended for engineering screening, not event forecasting.

### Engineering Moisture Exposure Distribution

Annual exposure hours by relative-humidity bin. Useful for humidity exposure and moisture sensitivity screening.

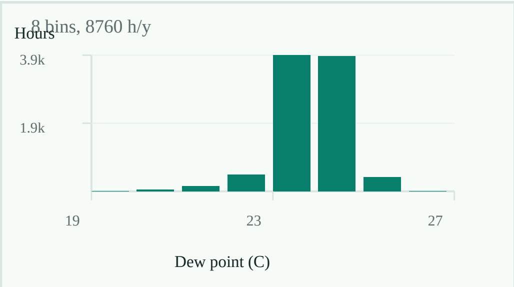



100 duration bins prepared.

**Design relevance**
Engineering Moisture Exposure Distribution: the CEY distribution spans approximately P05 74.1 %, P50 81.8 % and P95 89.3 %. The percentile spread is intended for engineering screening, not event forecasting.

### Dew Point Duration Distribution

Hourly CEY dew-point distribution using 1 C bins.

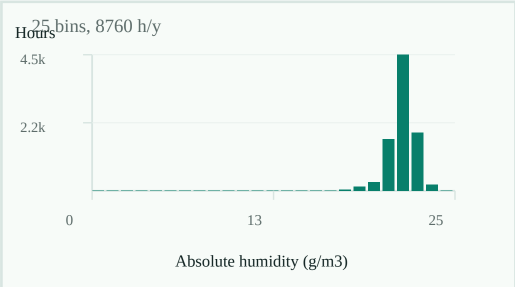



8 duration bins prepared.

**Design relevance**
Dew Point Duration Distribution: the CEY distribution spans approximately P05 22.7 C, P50 24.0 C and P95 25.0 C. The percentile spread is intended for engineering screening, not event forecasting.

### Absolute Humidity Distribution

Hourly CEY absolute-humidity distribution using 1 g/m3 bins.

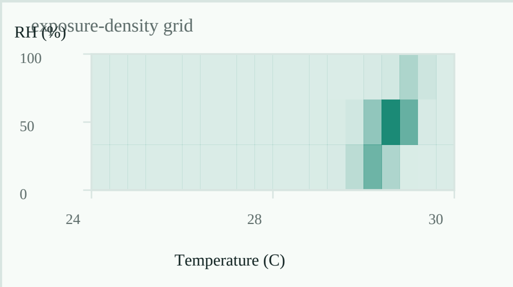



25 duration bins prepared.

**Design relevance**
Absolute Humidity Distribution: the CEY distribution spans approximately P05 19.9 g/m3, P50 21.5 g/m3 and P95 22.7 g/m3. The percentile spread is intended for engineering screening, not event forecasting.

### Temperature x RH joint histogram

Joint hourly exposure density for air temperature and relative humidity.

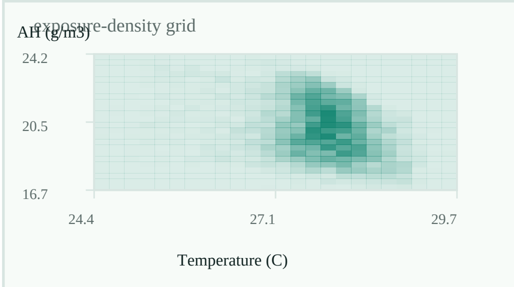



Two-dimensional exposure-density grid prepared.

**Engineering meaning**
The joint distribution shows paired temperature and relative-humidity exposure. For Singapore, warm and humid conditions occur together, which is more relevant for corrosion, connector reliability and moisture stress than separate averages.

### Psychrometric density plot

Hourly CEY state density in temperature and moisture-content space.




Two-dimensional exposure-density grid prepared.

**Engineering meaning**
The psychrometric density shows how often temperature and moisture content occur together. High absolute humidity indicates a large moisture reservoir around products and limited natural drying potential.

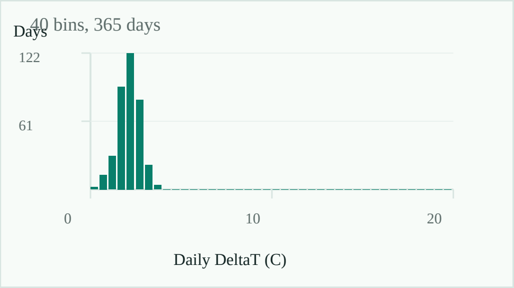
These figures are intended to support engineering environmental exposure assessment. They are not a lifetime prediction and do not replace product-specific reliability modelling or qualification testing.

## Cycle and Condensation Dynamics

Cycle statistics provide engineering input for thermomechanical and moisture-related reliability assessments. Representative high-risk weeks will be selected from the hourly CEY once available.

### Temperature cycle analysis

Temperature cycle statistics provide engineering input for thermomechanical reliability assessments.

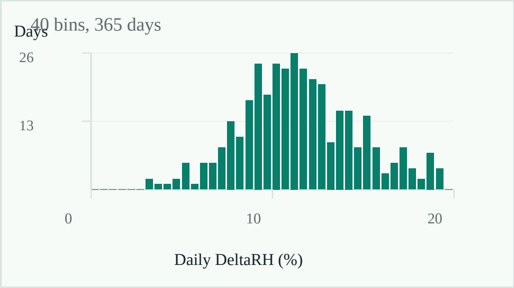



40 duration bins prepared.

**Qualification relevance**
Daily temperature cycling is low: mean daily DeltaT is 2.2 C, P95 is 3.1 C and the maximum is 3.8 C. 0 representative days exceed a 5 C daily cycle, supporting thermomechanical and enclosure-breathing review.

### Humidity cycle analysis

Hourly CEY humidity cycles for moisture absorption, drying potential and coating stress screening.

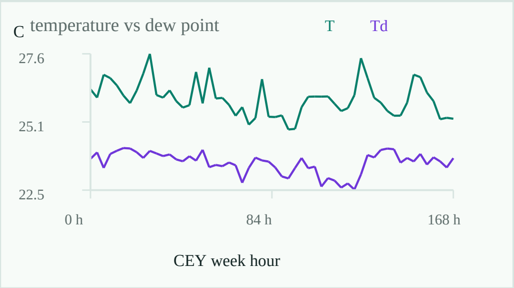



40 duration bins prepared.

**Qualification relevance**
Daily humidity cycling shows a mean amplitude of 12.0 %, P95 18.9 % and maximum 26.2 %. This supports moisture absorption, drying-potential and coating-stress screening.

### Condensation dynamics - representative high-risk week

Temperature and dew point time series for the representative CEY week with the smallest dew-point margin.




Representative high-risk week prepared from hourly CEY.

**Why this matters**
The representative high-risk week starts at CEY hour 3411. It highlights periods where air temperature and dew point remain close, indicating elevated moisture and condensation relevance.

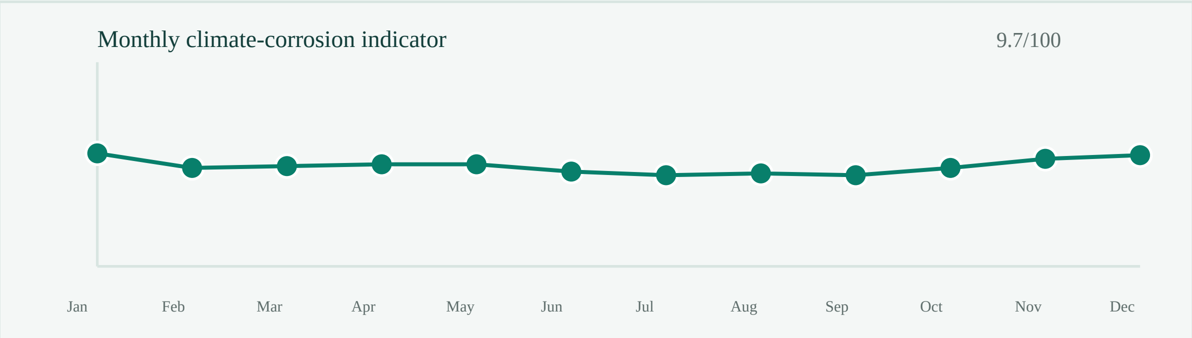
# 07 Moisture and Corrosion

| | | |
|---|---|---|
| RH >= 80%<br>**5,617 h** | RH >= 90%<br>**216 h** | Near-condensation<br>**617 h** |
| Humidity percentile<br>**77th** | Condensation percentile<br>**33rd** | Corrosion percentile<br>**99th** |

Moisture exposure is central to outdoor electronics, connectors, enclosures and coated assemblies. Long periods at high relative humidity can increase leakage-current sensitivity, coating stress and corrosion susceptibility.

| Metric | Value | Global percentile |
|---|---|---|
| RH at or above 80% | 5,617 h | 81st |
| RH at or above 90% | 216 h | 29th |
| Near-condensation potential | 617 h | 33rd |
| Temperature at or above 35 C | 0 h | 0th |
| Temperature at or below 0 C | 0 h | 0th |
| Climate-corrosion indicator | 9.1/100 | 99th |

## Monthly Moisture and Corrosion Profile



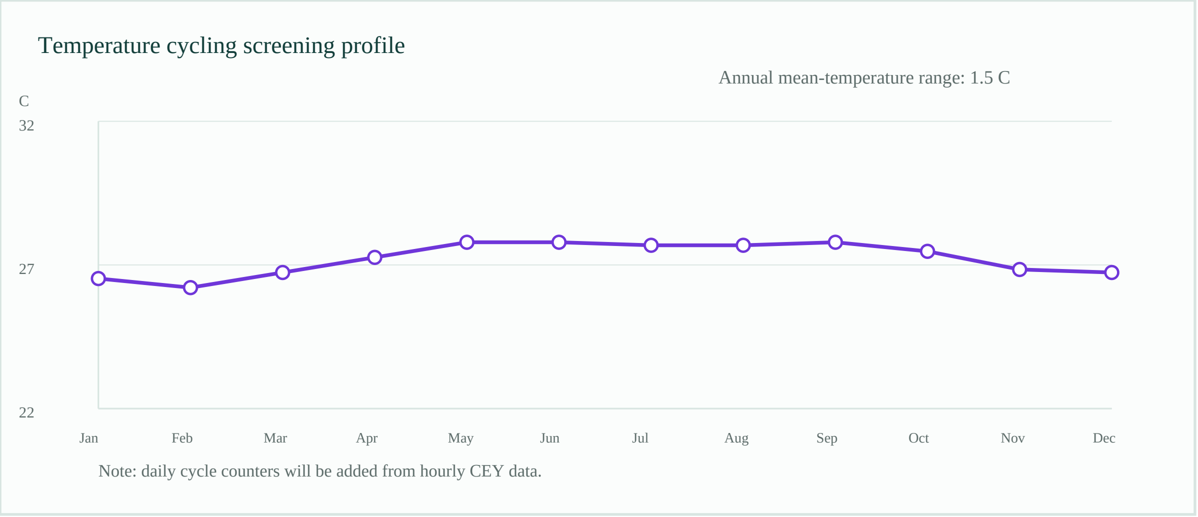

| Month | Temp. | RH | Condensation | Corrosion indicator |
|---|---|---|---|---|
| Jan | 26.7 C | 84.4% | 160 h | 9.8/100 |
| Feb | 26.4 C | 80.8% | 66 h | 9.0/100 |
| Mar | 26.9 C | 81.5% | 50 h | 9.1/100 |
| Apr | 27.4 C | 82.4% | 34 h | 9.2/100 |
| May | 27.9 C | 82.5% | 59 h | 9.2/100 |

| Month | Temp. | RH | Condensation | Corrosion indicator |
|---|---|---|---|---|
| Jun | 27.9 C | 80.8% | 34 h | 8.8/100 |
| Jul | 27.8 C | 79.7% | 29 h | 8.6/100 |
| Aug | 27.8 C | 80.2% | 18 h | 8.7/100 |
| Sep | 27.9 C | 80.0% | 21 h | 8.6/100 |
| Oct | 27.6 C | 81.3% | 25 h | 9.0/100 |
| Nov | 27.0 C | 83.3% | 53 h | 9.5/100 |
| Dec | 26.9 C | 84.0% | 68 h | 9.7/100 |

## Temperature Exposure

| Mean temperature | Annual mean range | Heat hours >=35 C |
|---|---|---|
| **27.3 C** | **1.5 C** | **0 h** |
| Freeze hours <=0 C | Heat percentile | Freeze percentile |
| **0 h** | **0th** | **0th** |

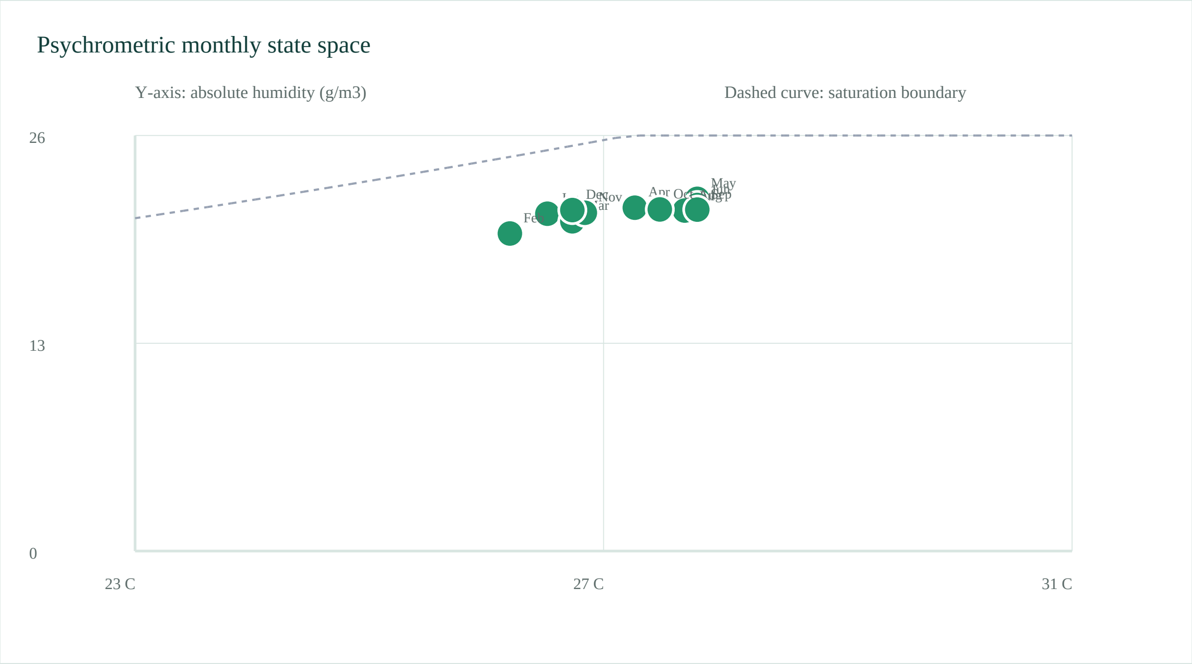
Temperature exposure is reported separately from moisture so that heat, freeze and cycling effects remain visible. For electronics, thermal cycling can be as relevant as absolute high or low temperature.




| Technical diagnostic component | Score | Weight |
|---|---|---|
| Condensation Potential | 20.1/100 | 35% |
| Severe Humidity | 8.2/100 | 25% |
| Corrosion Exposure | 9.1/100 | 25% |
| Heat Exposure | 0.0/100 | 15% |

# Psychrometric Environment

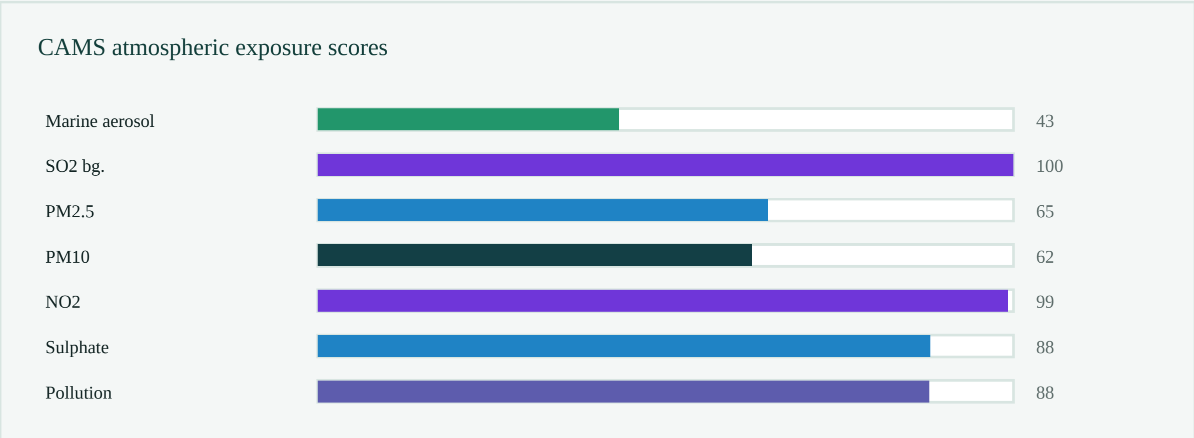
The psychrometric view links temperature, dew point and moisture content. Points near the saturation boundary indicate small margins to condensation when surfaces cool below ambient air temperature.



# 08 Atmospheric Exposure

CAMS atmospheric composition data is used as a site aggressiveness modifier for ISO-derived steel and aluminum corrosivity indicators. Sea-salt aerosol is converted to a chloride proxy and checked against coastline distance; SO2 is treated as coarse regional background context, while sulphate, PM and NO2 form the broader pollution context. Local industrial SO2 sources may dominate actual site exposure and are not resolved by CAMS. These material-related indicators are separate from the Climetry Exposure Class.

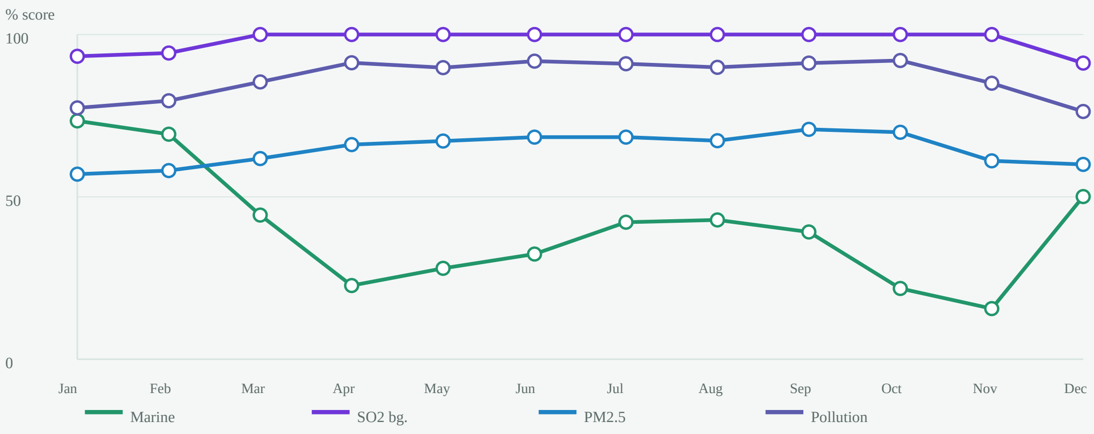
| | |
|---|---|
| **Data source** | CAMS EAC4 monthly means 2024 |
| **Marine aerosol exposure** | 43.3/100 (Moderate) |
| **Combined pollution exposure** | 87.9/100 (Severe) |
| **Regional SO2 background** | 100.0/100 (P3) |
| **PM2.5 / PM10 exposure** | 64.7/100 / 62.4/100 |
| **NO2 / sulphate exposure** | 99.2/100 / 88.0/100 |
| **Chloride proxy class** | S1 (18 mg/m2/day) |
| **Regional SO2 class** | P3 (60 mg/m2/day background proxy) |
| **Coastline guardrail** | 8.7 km to coast |



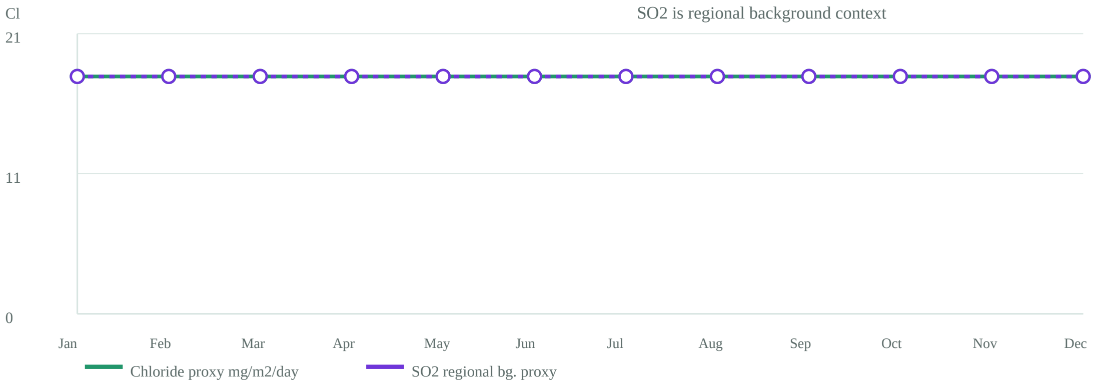

## CAMS Monthly Atmospheric Profile

Monthly CAMS profiles show seasonality in marine aerosol, regional SO2 background and particulate pollution modifiers. These monthly values are used as exposure-context inputs for corrosion screening and traceability; they should not be interpreted as local measured pollution.

## Monthly CAMS exposure scores




## Monthly ISO input proxy indicators




## ISO input proxy classes


Chloride proxy: 18 mg/m2/day

SO2 background proxy: 60 mg/m2/day

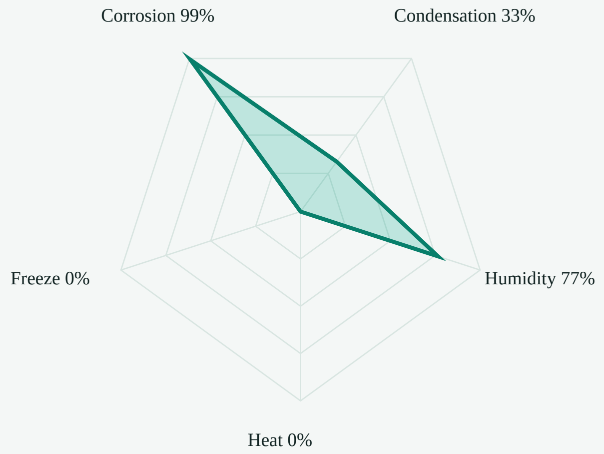
09

# Benchmark Comparison

Reference: Central Europe reference (50 N, 10 E). Comparisons use exposure fractions over the same processed benchmark months and support relative engineering screening.

| | | |
|---|---|---|
| Humidity Exposure<br>**+22%** | Corrosion Exposure<br>**+273%** | Heat Exposure<br>**-100%** |
| Freeze Exposure<br>**-100%** | Humidity Percentile<br>**77th** | Corrosion Percentile<br>**99th** |

Global exposure percentiles




| | | | |
|---|---|---|---|
| **Humidity Exposure** | **High** | 77th percentile | More humid than 76.6% of global benchmark locations. |
| **Condensation Exposure** | **Moderate** | 33rd percentile | Condensation exposure exceeds 32.6% of global benchmark locations. |
| **Climetry-derived corrosion exposure** | **Severe** | 99th percentile | Climate-corrosion exposure exceeds 99.2% of global benchmark locations. |

# 10 Engineering Recommendations

The following recommendations are screening guidance. They should be translated into product-specific test severities, acceptance criteria and design reviews.

## Engineering Recommendations

**1.** Review corrosion protection strategy for exposed metals, fasteners, connectors and enclosure interfaces.

**2.** Consider corrosion-focused material, coating and surface-finish validation before deployment.

**3.** Review connector sealing, cable entry design, enclosure drainage and moisture-ingress paths.

**4.** Include hot-humid operation and powered condensation screening in qualification planning.

## Reliability Implications

**1.** Material and connector durability may require enhanced corrosion protection and shorter inspection intervals.

## Qualification Guidance

**1.** Use the monthly profile to select representative hot-humid and condensation-prone qualification conditions.

**2.** Confirm enclosure, coating, connector, and drainage performance using product-specific acceptance criteria.

**3.** Include combined temperature-humidity cycling and powered condensation testing before deployment.

**4.** Add corrosion-focused material and coating tests; replace coastline and background-pollution proxies with measured or CAMS deposition data when available.

**5.** Map final test severities to the applicable IEC, ISO, customer, or internal qualification standard.

# A Appendix - Assessment Scope and Traceability

## Assessment Scope

| | |
|---|---|
| **Location** | 1.35210, 103.81980 |
| **Data coverage** | CEY5 pilot 2015-2019: 12 monthly summaries (8760 hours) |
| **Global benchmark** | cey-pilot-2015-2019-01, cey-pilot-2015-2019-02, cey-pilot-2015-2019-03, cey-pilot-2015-2019-04, cey-pilot-2015-2019-05, cey-pilot-2015-2019-06, cey-pilot-2015-2019-07, cey-pilot-2015-2019-08, cey-pilot-2015-2019-09, cey-pilot-2015-2019-10, cey-pilot-2015-2019-11, cey-pilot-2015-2019-12; 1,054,152 grid locations |
| **Product reliability risk** | Not determined - requires product design, qualification limits, and failure data |
| **Technical diagnostic model** | outdoor_electronics_climate_stress_index v1.1.0; component scores are not comparable with CE-1 to CE-5 |
| **CE vs ISO** | CE classes describe overall environmental severity and are not equivalent to ISO corrosivity classes. |
| **Interpretation** | Climate-only screening; CE classes indicate environmental severity and qualification relevance, not failure probability, service-life prediction, certification, or standards class |
| **Generated** | 2026-07-03 09:25 UTC |

## Climetry Environmental Year Summary

| | |
|---|---|
| **Purpose** | Representative environmental year for durability and exposure screening |
| **Reference period** | cey-pilot-2015-2019-01, cey-pilot-2015-2019-02, cey-pilot-2015-2019-03, cey-pilot-2015-2019-04, cey-pilot-2015-2019-05, cey-pilot-2015-2019-06, cey-pilot-2015-2019-07, cey-pilot-2015-2019-08, cey-pilot-2015-2019-09, cey-pilot-2015-2019-10, cey-pilot-2015-2019-11, cey-pilot-2015-2019-12 |
| **Hourly variables** | Temperature, dew point, relative humidity, absolute humidity and pressure |
| **Derived exposure counters** | RH80/RH90, wetness, condensation potential, heat/freeze and cycling indicators |
| **Interpretation** | Representative long-term exposure, not a worst-case year and not a failure prediction |

CEY follows the logic of representative meteorological years but extends the weighting toward product durability. The final customer-facing CEY will preserve hourly environmental distributions so that exposure hours, cycling and psychrometric state can be calculated consistently.

## Environmental Data Confidence

| Variable | Agreement | Pilot comparison metric |
| --- | --- | --- |
| Temperature | High | RMSE 1.15 C |
| Dew point | High | RMSE 1.20 C |
| Relative humidity | Good | RMSE 5.48 percentage points |
| Surface pressure | Good | Long-term station consistency check |

These comparisons evaluate long-term environmental representativeness and not individual weather events. They are an intermediate evidence step before full CEY and exposure-hour validation.

## Methodology & Traceability

| | |
|---|---|
| **Assessment** | Climetry Exposure Assessment |
| **Assessment Version** | 1.0.0 |
| **Data Source** | ERA5 Reanalysis; CAMS EAC4 atmospheric composition |
| **Dataset Version** | ERA5 single levels; CAMS EAC4 monthly averaged fields |
| **Reference Period** | cey-pilot-2015-2019-01, cey-pilot-2015-2019-02, cey-pilot-2015-2019-03, cey-pilot-2015-2019-04, cey-pilot-2015-2019-05, cey-pilot-2015-2019-06, cey-pilot-2015-2019-07, cey-pilot-2015-2019-08, cey-pilot-2015-2019-09, cey-pilot-2015-2019-10, cey-pilot-2015-2019-11, cey-pilot-2015-2019-12 |
| **Resolution** | ERA5 0.25 deg; CAMS 0.75 deg |
| **Model Version** | Climetry Exposure Model v1.0 |
| **Calculation Date** | 2026-06-18 |
| **Processing Date** | 2026-06-18 |
| **Location** | 1.35210, 103.81980 |
| **Corrosion Method** | ISO-derived atmospheric corrosivity screening with CAMS-derived chloride proxy and regional SO2 background context |
| **Classification Hierarchy** | Environmental severity (CE) -> exposure mechanisms -> ISO-derived material corrosivity indicators -> engineering interpretation |
| **CE Interpretation** | CE classes describe overall environmental severity and are not equivalent to ISO corrosivity classes. |

## Input Variables

| | |
|---|---|
| 1. | ERA5 2m temperature |
| 2. | ERA5 2m dew point |
| 3. | ERA5 surface pressure |
| 4. | Derived relative humidity |
| 5. | Derived absolute humidity |
| 6. | Exposure-hour counters |
| 7. | Coastline distance |
| 8. | CAMS sea-salt aerosol mass/optical proxy |
| 9. | CAMS regional sulphur dioxide background proxy |
| 10. | CAMS sulphate aerosol |
| 11. | CAMS PM2.5 / PM10 |
| 12. | CAMS NO2 |

## Assumptions

| | |
|---|---|
| 1. | TMY/customer-facing baseline will use ERA5 2015-2024 once complete; current report uses the available processed benchmark months when TMY is not yet present. |
| 2. | CAMS annual atmospheric modifiers are treated as site aggressiveness context, not as hourly weather drivers. |
| 3. | CAMS marine aerosol is converted to a chloride proxy and blended with coastline distance as a guardrail. |
| 4. | CAMS SO2 is used as coarse regional background context; sulphate, PM and NO2 are mapped to broader pollution proxy scores for screening. |
| 5. | CE classes are Climetry-derived environmental severity indicators, not ISO 9223 corrosivity classes. |

## Limitations

| | |
|---|---|
| 1. | Not a certified ISO 9223 corrosivity classification. |
| 2. | CE classes describe overall environmental severity and are not equivalent to ISO corrosivity classes. |
| 3. | CE classes indicate environmental severity and qualification relevance, not failure probability. |
| 4. | CAMS does not directly provide ISO chloride deposition rate in mg/m2/day; conversion is a documented proxy. |
| 5. | CAMS SO2 does not resolve local industrial sources or street-scale pollution; site-specific SO2 measurements should override this background proxy where available. |
| 6. | Local shielding, microclimate, surface temperature, washing, actual deposition measurements and product design are not fully represented. |
| 7. | Outputs are engineering screening evidence, not a failure probability or service-life prediction. |

## Methodology Block

| **Climetry Exposure Assessment** | |
|---|---|
| **Assessment Version** | 1.0.0 |
| **Data Source** | ERA5 Reanalysis; CAMS EAC4 atmospheric composition |
| **Reference Period** | cey-pilot-2015-2019-01, cey-pilot-2015-2019-02, cey-pilot-2015-2019-03, cey-pilot-2015-2019-04, cey-pilot-2015-2019-05, cey-pilot-2015-2019-06, cey-pilot-2015-2019-07, cey-pilot-2015-2019-08, cey-pilot-2015-2019-09, cey-pilot-2015-2019-10, cey-pilot-2015-2019-11, cey-pilot-2015-2019-12 |
| **Resolution** | ERA5 0.25 deg; CAMS 0.75 deg |
| **Processing Date** | 2026-06-18 |
| **Methodology** | Climetry Exposure Model v1.0 |
| **Climetry-derived Indicators** | CE class, exposure percentiles, humidity/condensation/corrosion exposure indicators |
| **ISO-derived Indicators** | Estimated steel and aluminum atmospheric corrosivity derived from ISO 9223 environmental indicators |

| | |
|---|---|
| **Interpretation** | High humidity and condensation exposure may result in a severe Climetry Exposure Class even if atmospheric metal corrosivity remains moderate. |
| **Disclaimer** | CE classes indicate environmental severity and qualification relevance, not failure probability. |

## Appendix

## Climate Summary

| | |
|---|---|
| **Mean air temperature** | 27.34 C |
| **Mean dew point** | 23.92 C |
| **Mean relative humidity** | 81.8 % |
| **Mean absolute humidity** | 21.43 g/m3 |
| **Mean surface pressure** | 1009.2 hPa |
| **Steel ISO-derived corrosivity indicator** | 7.24 um/year (C2) |
| **Aluminum ISO-derived corrosivity indicator** | 0.365 um/year (C2) |
| **Distance to coastline** | 8.7 km (5-20 km) |
| **Marine exposure proxy** | 55/100; screening proxy; coastline distance is not measured chloride deposition |
| **Chloride proxy input** | 18 mg/m2/day |
| **Regional SO2 background input** | 60 mg/m2/day |

## Monthly Engineering Table

| Month | Temp. | RH | Condensation | Corrosion indicator |
|---|---|---|---|---|
| Jan | 26.7 C | 84.4% | 160 h | 9.8/100 |
| Feb | 26.4 C | 80.8% | 66 h | 9.0/100 |
| Mar | 26.9 C | 81.5% | 50 h | 9.1/100 |
| Apr | 27.4 C | 82.4% | 34 h | 9.2/100 |
| May | 27.9 C | 82.5% | 59 h | 9.2/100 |
| Jun | 27.9 C | 80.8% | 34 h | 8.8/100 |
| Jul | 27.8 C | 79.7% | 29 h | 8.6/100 |
| Aug | 27.8 C | 80.2% | 18 h | 8.7/100 |
| Sep | 27.9 C | 80.0% | 21 h | 8.6/100 |
| Oct | 27.6 C | 81.3% | 25 h | 9.0/100 |
| Nov | 27.0 C | 83.3% | 53 h | 9.5/100 |
| Dec | 26.9 C | 84.0% | 68 h | 9.7/100 |

## Data Source Summary

| | |
|---|---|
| **Data Source** | ERA5 Reanalysis; CAMS EAC4 atmospheric composition |
| **Dataset Version** | ERA5 single levels; CAMS EAC4 monthly averaged fields |
| **Resolution** | ERA5 0.25 deg; CAMS 0.75 deg |
| **Model Version** | Climetry Exposure Model v1.0 |
| **Calculation Date** | 2026-06-18 |
| **Methodology** | Climetry Exposure Model v1.0 |