

5 CASE TEMPERATURE MEASUREMENT POINTS

The thermal management characteristics of the heat sink used with the CTM should be validated by measuring its case temperature. This test should be done with the CTM installed in the fixture at ambient temperature and air flow conditions similar to the end-use installation.

araya⁵ CTM 0ND or CTM 0TD are available with two CCT ranges: 1650 – 4000K and 2700 – 6000K. Depending on the CCT range, the case temperature should be measured at the following CCT setting.

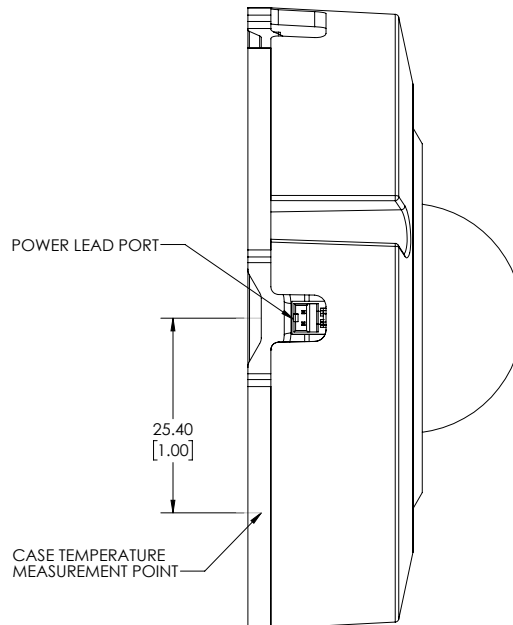
CCT Setting for Case Temperature (T_c) Measurement

CCT range	CCT Setting to Measure T _c
1650 – 4000K	2800K
2700 – 6000K	4400K

The proper case temperature measurement location is on the narrow metal band, next to the power lead port; see figure below. The case temperature reading should be made after the unit has reached steady state, where the case temperature levels out. It is recommended to design the thermal management system for a case temperature of 70°C.

Maximum case temperature: 70°C

The Color Tuning Module has on-board thermal protection to reduce the current to the LEDs when the maximum case temperature is exceeded. This prevents unacceptably high LED junction temperatures by slightly dimming the module.



Case Temperature Measurement Point