

Yellow LED - Module

ELJ-595-225

Preliminary data

| Color | Type | Technology | Case |
|--------|------------|--------------|--------------------------|
| Yellow | 20 degrees | AllnGaP/GaAs | plastic lens, metal case |

Description

High-power yellow-LED module, AllnGaP/GaAs structure, six chips are soldered on metal stud header, fast switching time

Outline:

Types A, B, C

H 13,0 mm ($\pm 0,2$)

Applications

Illumination for CCD-cameras, optical communications, traffic signals, measurement systems

Absolute Maximum Ratings

at $T_{amb} = 25^{\circ}\text{C}$, unless otherwise specified

| Parameter | Test conditions | Symbol | Value | Unit |
|-----------------------------|---|-----------|------------|--------------------|
| DC forward current | on heat sink | I_F | 100 | mA |
| Peak forward current | $t_p \leq 10 \mu\text{s}$, $f \leq 500 \text{ Hz}$ | I_{FM} | 1000 | mA |
| Reverse voltage* | $I_R = 10 \mu\text{A}$ | V_R | 20 | V |
| Power dissipation | on heat sink ($S \geq 50 \text{ cm}^2$) | P | 1.5 | W |
| Operating temperature range | | T_{amb} | -60 to +85 | $^{\circ}\text{C}$ |
| Storage temperature range | | T_{stg} | -60 to +85 | $^{\circ}\text{C}$ |
| Junction temperature | | T_j | 100 | $^{\circ}\text{C}$ |

*Always protect the LED source against reverse currents

Optical and Electrical Characteristics

at $T_{amb} = 25^{\circ}\text{C}$, unless otherwise specified

| Parameter | Test conditions | Symbol | Min | Typ | Max | Unit |
|----------------------------------|------------------------|-----------------------|-----|-----|-----|-------|
| Forward voltage | $I_F = 100 \text{ mA}$ | V_F | | 13 | 14 | V |
| Radiant power | $I_F = 100 \text{ mA}$ | Φ_e | 10 | 12 | | mW |
| Radiant intensity | $I_F = 100 \text{ mA}$ | I_e | 45 | 50 | | mW/sr |
| Luminous intensity | $I_F = 100 \text{ mA}$ | I_v | 20 | 23 | | cd |
| Luminous flux | $I_F = 100 \text{ mA}$ | I_v | 6 | 6.3 | | lm |
| Peak wavelength | $I_F = 100 \text{ mA}$ | λ_p | 585 | 595 | 605 | nm |
| Dominant wavelength | $I_F = 100 \text{ mA}$ | λ_D | 580 | 590 | 600 | nm |
| Spectral bandwidth at 50% | $I_F = 100 \text{ mA}$ | $\Delta\lambda_{0,5}$ | | 15 | | nm |
| Viewing angle | $I_F = 100 \text{ mA}$ | φ | | 15 | 20 | deg |
| Switching time | $I_F = 100 \text{ mA}$ | t_r, t_f | | 50 | | ns |
| Thermal resistance junction-case | | R_{thJC} | | 10 | | K/W |