

Infrared LED - Module

ELJ-870-211

Preliminary

Radiation	Type	Technology	Case
Infrared	3 W	AlGaAs/AlGaAs	plastic lens, metal case

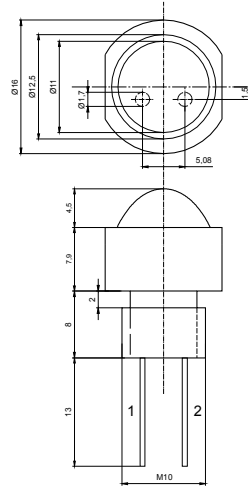
Description

High-power infrared-LED module, consisting a 1 mm DDH - AlGaAs die; fast switching time

Applications

Illumination for CCD-cameras, remote control and optical communications, light barriers, measurement systems

Outline: H=12,4 mm (± 0,5)
D = 16 mm (± 0,5)
M10



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	1,5	A
Peak forward current	$t_p \leq 10 \mu\text{s}$, $f \leq 500 \text{ Hz}$	I_{FM}	3	A
Reverse current	$V_R = 5 \text{ V}$	I_R	10	μA
Power dissipation	on heat sink ($S \geq 50 \text{ cm}^2$)	P	3,5	W
Operating temperature range		T_{amb}	-25 to + 85	$^{\circ}\text{C}$
Storage temperature range		T_{stg}	-25 to +100	$^{\circ}\text{C}$
Junction temperature		T_j	100	$^{\circ}\text{C}$

Optical and Electrical Characteristics

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

Parameter	Test conditions	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F = 350 \text{ mA}$	V_F		1.5	1.7	V
Forward voltage	$I_F = 1 \text{ A}$	V_F		2.0	2.3	V
Radiant intensity	$I_F = 350 \text{ mA}$	I_e	0.5	0.75		W/sr
Radiant intensity	$I_F = 1 \text{ A}$	I_e		2.0		W/sr
Peak wavelength	$I_F = 1 \text{ A}$	λ_p	860	870	885	nm
Spectral bandwidth at 50%	$I_F = 1 \text{ A}$	$\Delta\lambda_{0,5}$		45		nm
Viewing angle	$I_F = 1 \text{ A}$	ϕ		15		deg
Switching time	$I_F = 1 \text{ A}$	t_r/t_f		10/20		ns
Thermal resistance junction-case		R_{thJC}		10		K/W