

preliminary

Radiation	Type	Technology	Case
Green	4.5 W	InGaN/Al ₂ O ₃	Plastic lens, metal case

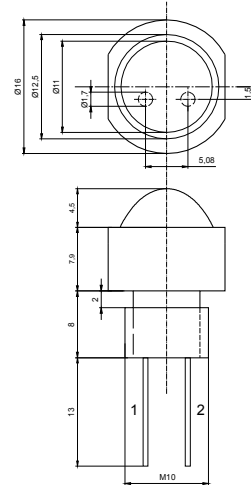
Description

High-power green LED in an aluminium case with thread socket, for easy handling and heat sink mounting

Applications

Illumination, remote control and optical communications, light barriers, measurement systems

Outline: H = 12.4 mm (± 0.5)
 D = 16 mm (± 0.5)
 Thread M10
 Pin 1 – cathode
 Pin 2 – anode



Absolute Maximum Ratings

at T_{amb} = 25°C, on heat sink (S ≥ 50 cm²), unless otherwise specified

Parameter	Test conditions	Symbol	Value	Unit
DC forward current	on heat sink	I _F	1.0	A
Peak forward current	t _p ≤ 10 μs, f ≤ 500 Hz	I _{FM}	1.6	A
Power dissipation	on heat sink	P	4.5	W
Operating temperature range	on heat sink	T _{amb}	-25 to +100	°C
Storage temperature range	on heat sink	T _{stg}	-25 to +100	°C
Junction temperature	on heat sink	T _j	100	°C

Electrical Characteristics

at T_{amb} = 25°C, on heat sink (S ≥ 50 cm²), unless otherwise specified

Parameter	Test conditions	Symbol	Min	Typ	Max	Unit
Forward voltage	I _F = 350 mA	V _F		3.6	3.9	V
Forward voltage ¹	I _F = 700 mA	V _F		4.0	4.4	V
Switching time	I _F = 350 mA	t _r , t _f		15/45		ns
Reverse voltage	I _R = 10 μA	V _R	5			
Thermal resistance junction-case		R _{thJC}		13		K/W

¹only recommended on optimal heat sink

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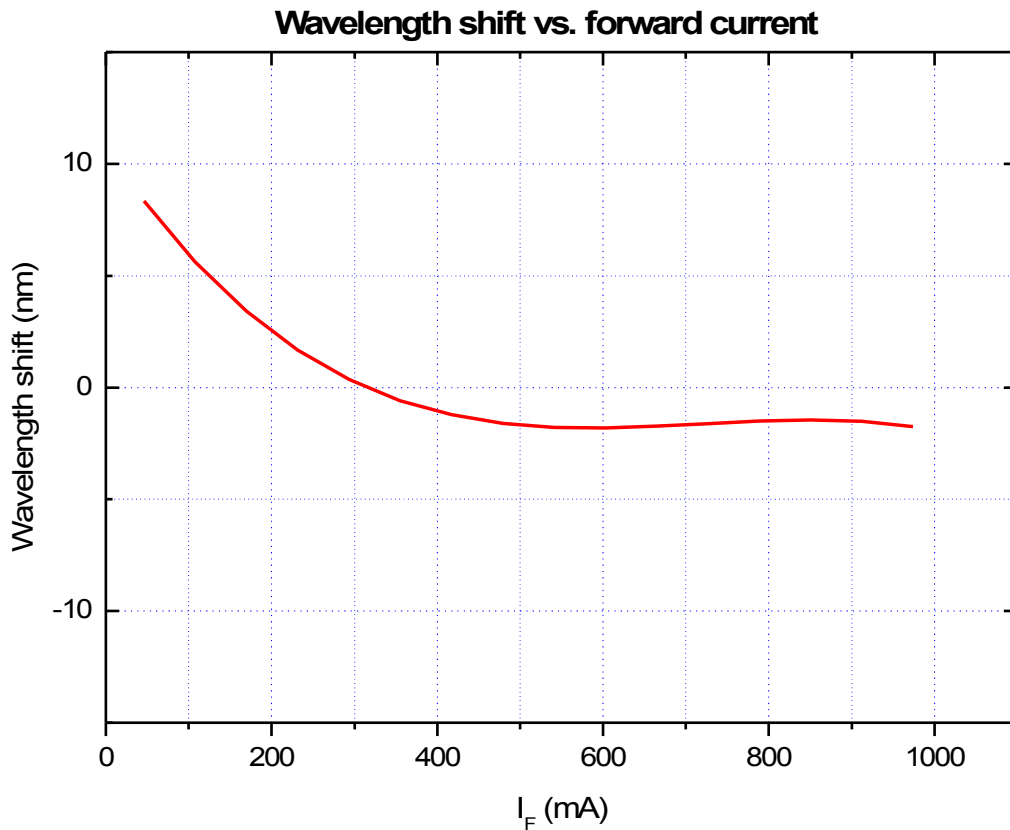
Optical Characteristics

at $T_{amb} = 25^{\circ}C$, on heat sink ($S \geq 50 \text{ cm}^2$), unless otherwise specified

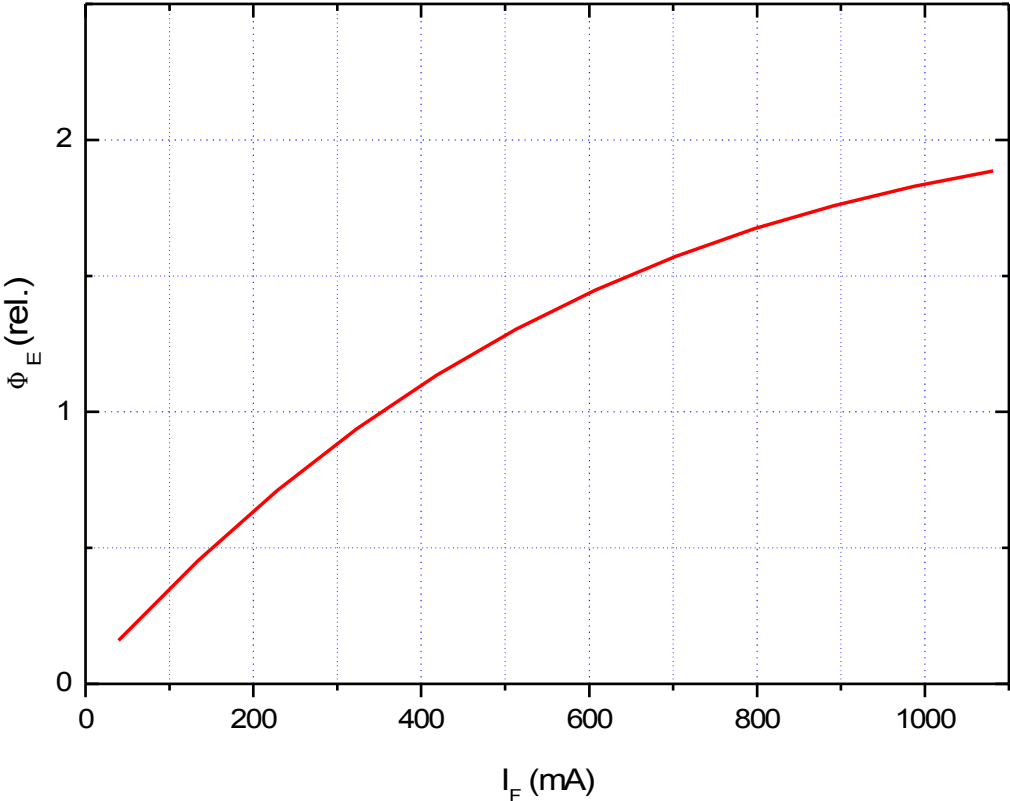
Parameter	Test conditions	Symbol	Min	Typ	Max	Unit
Radiant power	$I_F = 350 \text{ mA}$	Φ_e	20	23		mW
Radiant power ¹	$I_F = 700 \text{ mA}$	Φ_e	32	36		mW
Luminous intensity	$I_F = 350 \text{ mA}$	I_v	990	1075		mcd
Luminous intensity ¹	$I_F = 700 \text{ mA}$	I_v	1500	1600		mcd
Peak wavelength ²	$I_F = 20 \text{ mA}$	λ_p		525	530	nm
Peak wavelength	$I_F = 350 \text{ mA}$	λ_p	510	515	520	nm
Spectral bandwidth at 50%	$I_F = 350 \text{ mA}$	$\Delta\lambda_{0.5}$		32		nm
Viewing angle	$I_F = 350 \text{ mA}$	φ		15		deg

¹ only recommended on optimal heat sink

² for reference purpose



Normalized radiant power vs. forward current



Forward voltage vs. forward current

