

Radiation	Type	Technology	Case
Green	Standard	InGaN/Al ₂ O ₃	5 mm plastic lens

	Description Reliable high-speed green LED in standard 5 mm package, narrow beam angle, housing without standoff leads Note: Special packages with standoff available on request
	Applications Optical communications, safety equipment, automation, optical sensors

Maximum Ratings

T_{amb} = 25°C, unless otherwise specified

Parameter	Test conditions	Symbol	Value	Unit
Forward current (DC)		I _F	20	mA
Peak forward current	(t _p ≤ 50 μs, t _p /T = 1/2)	I _{FM}	100	mA
Power dissipation		P _D	65	mW
Operating temperature range		T _{amb}	-40 to +85	°C
Storage temperature range		T _{stg}	-40 to +100	°C
Junction temperature		T _J	100	°C

Optical and Electrical Characteristics

T_{amb} = 25°C, unless otherwise specified

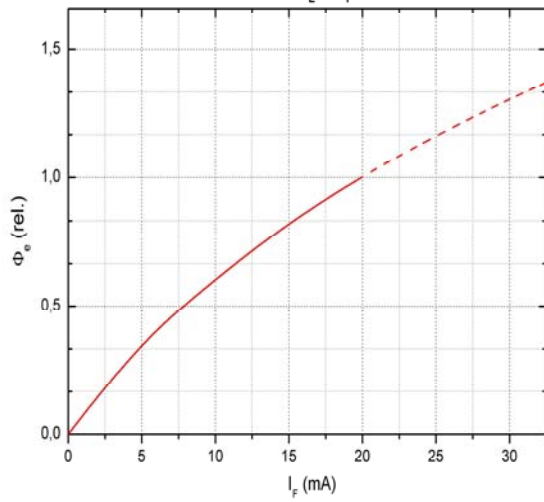
Parameter*	Test conditions	Symbol	Min	Typ	Max	Unit
Forward voltage	I _F = 20 mA	V _F		3.4	4.0	V
Reverse voltage	I _R = 100 μA	V _R	5			V
Radiant power	I _F = 20 mA	Φ _e	2.4	3.4		mW
Radiant intensity	I _F = 20 mA	I _e	15	20		mW/sr
Luminous intensity	I _F = 20 mA	I _v	4900	7000		mcd
Peak wavelength	I _F = 20 mA	λ _p	510	515	520	nm
Dominant wavelength	I _F = 20 mA	λ _D		525		nm
Viewing angle	I _F = 20 mA	φ		15		deg.
Switching time	I _F = 20 mA	t _r , t _f		15		ns

*measured after 30s current flow

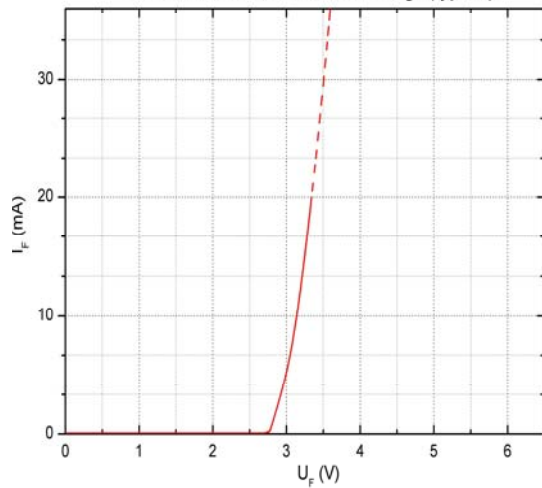
Note: All measurements carried out on *EPIGAP* equipment

We reserve the right to make changes to improve technical design and may do so without further notice.
Parameters can vary in different applications. All operating parameters must be validated for each customer application by the customer.

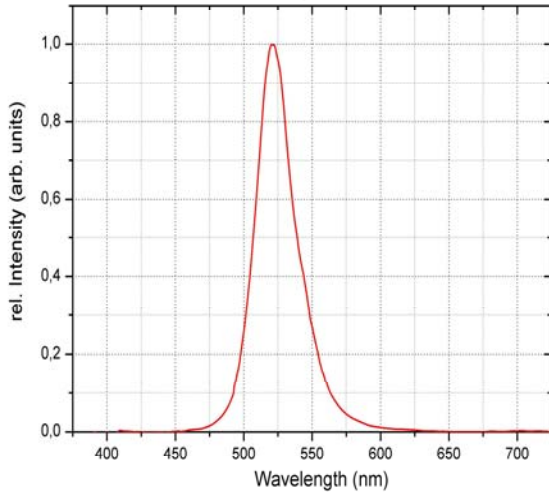
Radiant power vs. forward current (typical)
normalized to Φ_E @ $I_F = 20$ mA



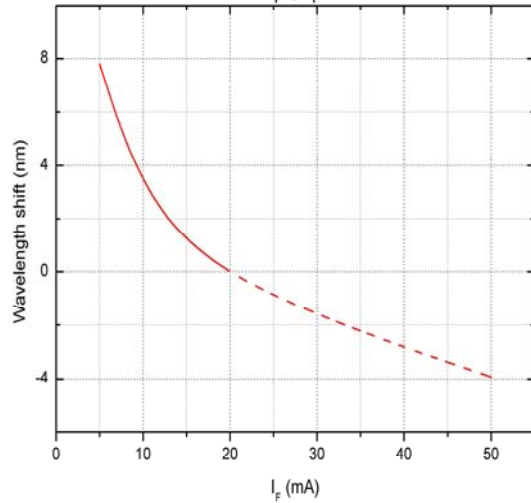
Forward current vs. forward voltage (typical)



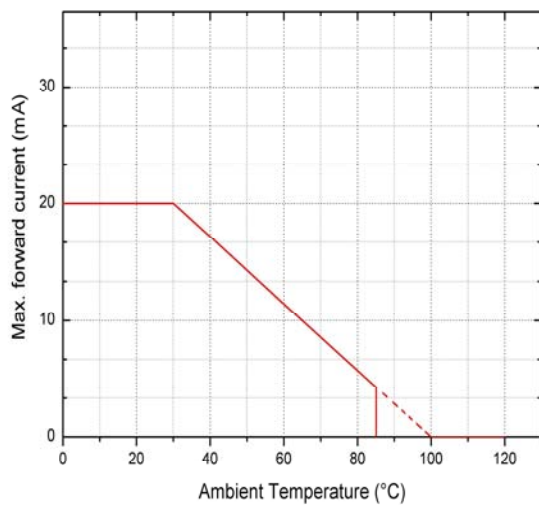
Spectral power distribution (typical)
at $I_F = 20$ mA



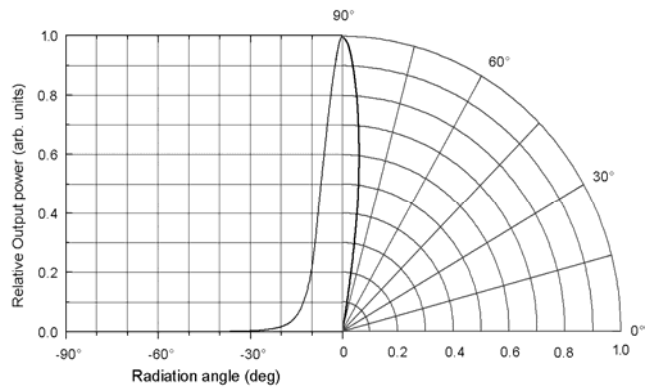
Typical wavelength shift vs. forward current
(rel. to λ_p @ $I_F = 20$ mA)



Ambient Temperature vs. maximal forward current



Typical radiant pattern



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Remarks concerning optical radiation safety*

Up maximum forward current and at continuous operation, this LED may be classified as LED product *Class 1*, according to standard IEC 60825-1:A2. *Class 1* products are safe to eyes and skin under reasonably predictable conditions. This implicates a direct observation of the light beam by means of optical instruments.

*Note: Safety classification of an optical component mainly depends on the intended application and the way the component is being used. Furthermore, all statements made to classification are based on calculations and are only valid for this LED "as it is", and at continuous operation. Using pulsed current or altering the light beam with additional optics may lead to different safety classifications. Therefore these remarks should be taken as recommendation and guideline only.

