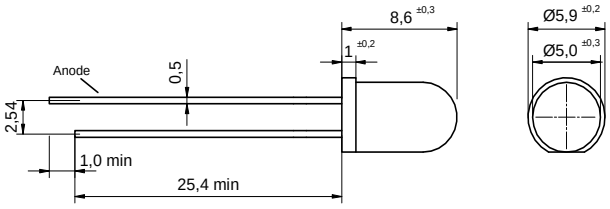
LED - Lamp ELD-780-524

03.04.2008 rev. 01

Radiation	Type	Technology	Case
Infrared	DDH	AlGaAs/AlGaAs	5 mm plastic lens



Description

High-power, high-speed LED with narrow beam angle and high reliability, housing without standoff leads

Note: Special packages without standoff available on request

Applications

Optical communications, safety equipment, automation

Maximum Ratings

T_{amb} = 25℃, unless otherwise specified

Parameter	Test conditions	Symbol	Value	Unit
Forward current (DC)		I_F	80	mA
Peak forward current	(t_P = 100 µs, D = 0,05)	I_{FM}	800	mA
Power dissipation		P_D	160	mW
Operating temperature range		T_{amb}	-40 to +85	℃
Storage temperature range		T_{stg}	-55 to +100	℃
Junction temperature		T_J	100	℃
Lead soldering temperature	< 5 s, 3.0 mm from case	T_{sol}	260	℃

Optical and Electrical Characteristics

T_{amb} = 25℃, unless otherwise specified

Parameter	Test conditions	Symbol	Min	Typ	Max	Unit
Forward voltage	I_F = 20 mA	V_F		1.7	2.0	V
Forward voltage[1]	I_F = 50 mA	V_F		1.9		V
Reverse voltage	I_R = 100 µA	V_R	5			V
Radiant power	I_F = 20 mA	Φ_e	6	8.5		mW
Radiant power[1]	I_F = 50 mA	Φ_e		20		mW
Radiant intensity	I_F = 20 mA	I_e	20	35		mW/sr
Radiant intensity[1]	I_F = 50 mA	I_e		90		mW/sr
Peak wavelength	I_F = 20 mA	λ_p	765	780	790	nm
Spectral bandwidth at 50%	I_F = 20 mA	$\Delta\lambda_{0.5}$		25		nm
Viewing angle	I_F = 20 mA	φ		20		deg.
Switching time	I_F = 20 mA	t_r, t_f		40		ns

[1]for information only

Note: All measurements carried out on *EPIGAP* equipment

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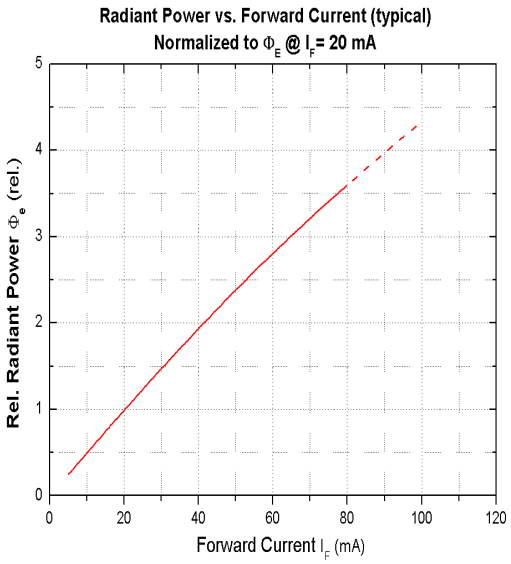

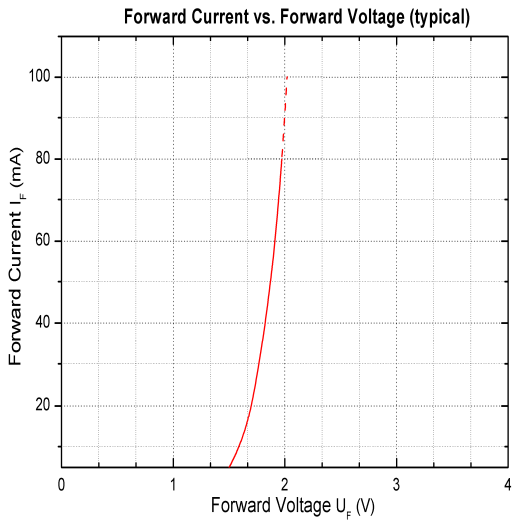

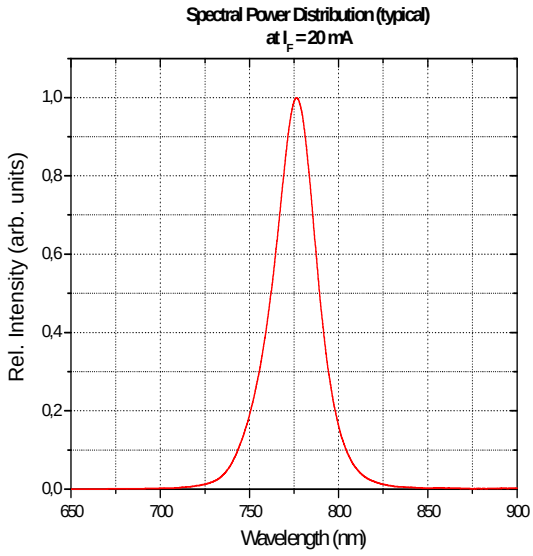

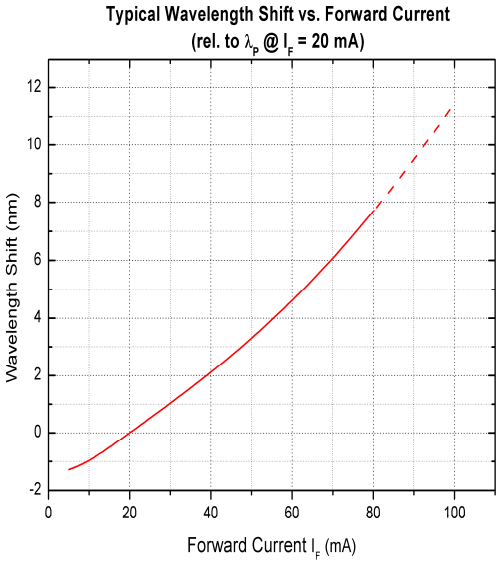

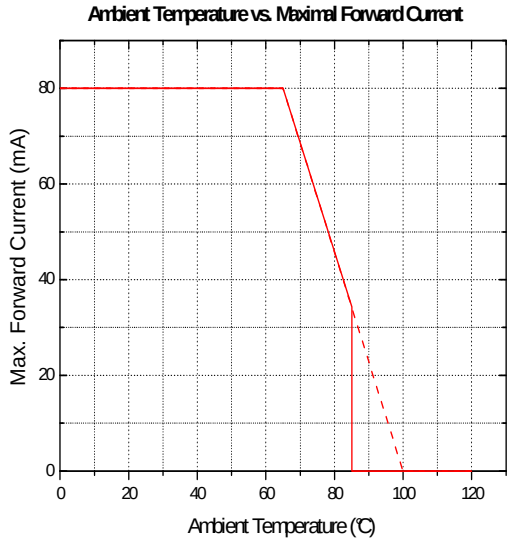

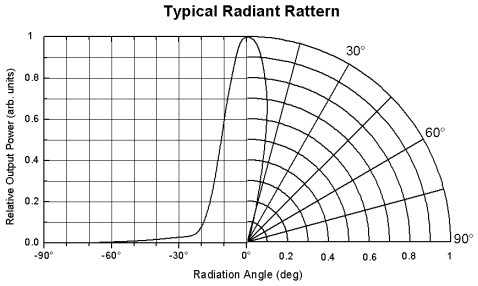

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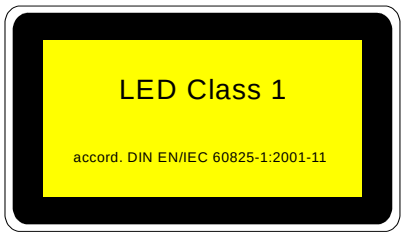
Remarks concerning optical radiation safety*

Up to maximum forward current, 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.



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