



## LED - Lamp

## ELD-670-524

discontinued

16.11.2007

rev. 02

Radiation	Type	Technology	Case
Red	DDH	GaAlAs/GaAlAs	5 mm plastic lens

Description	
	<p>High-power, high-speed red LED in standard 5 mm package, with lens for optimal beam forming, housing without standoff leads</p> <p>Note: Special packages with standoff available on request</p>
Applications	
Optical communications, safety equipment, automation	

### Maximum Ratings

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

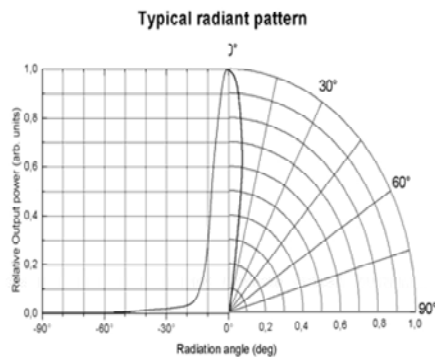
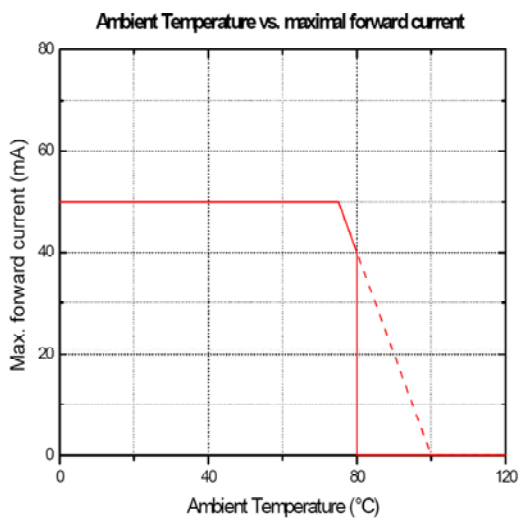
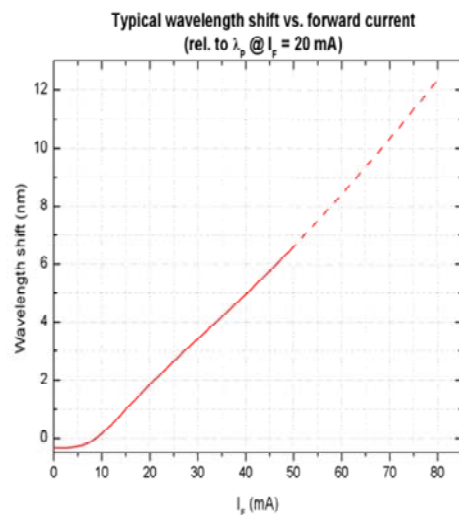
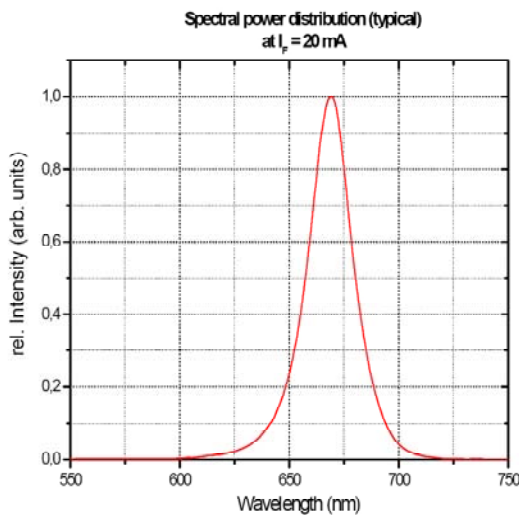
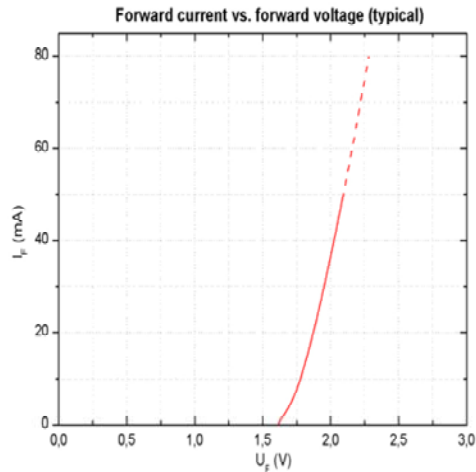
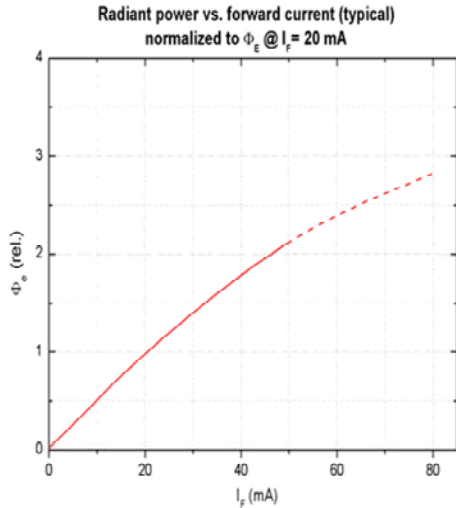
Parameter	Test conditions	Symbol	Value	Unit
Forward current (DC)		$I_F$	50	mA
Peak forward current	( $t_p \leq 50 \mu\text{s}$ , $t_p / T = 1/2$ )	$I_{FM}$	100	mA
Power dissipation		$P_D$	150	mW
Operating temperature range		$T_{amb}$	-20 to +80	$^{\circ}\text{C}$
Storage temperature range		$T_{stg}$	-30 to +100	$^{\circ}\text{C}$
Junction temperature		$T_J$	100	$^{\circ}\text{C}$
Soldering temperature	$t \leq 5 \text{ s}$ , 3 mm from case	$T_{sd}$	260	$^{\circ}\text{C}$

### Optical and Electrical Characteristics

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

Parameter	Test conditions	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F = 20 \text{ mA}$	$V_F$		1.8	2.2	V
Reverse voltage	$I_R = 10 \mu\text{A}$	$V_R$	5			V
Radiant power	$I_F = 20 \text{ mA}$	$\Phi_e$	5.5	8		mW
Radiant power*	$I_F = 50 \text{ mA}$	$\Phi_e$		18		mW
Luminous intensity	$I_F = 20 \text{ mA}$	$I_v$	550	780		mcd
Luminous intensity	$I_F = 50 \text{ mA}$	$I_v$		1500		mcd
Peak wavelength	$I_F = 20 \text{ mA}$	$\lambda_p$	660	670	680	nm
Spectral bandwidth at 50%	$I_F = 20 \text{ mA}$	$\Delta\lambda_{0.5}$		25		nm
Viewing angle	$I_F = 20 \text{ mA}$	$\varphi$		20		deg.
Switching time	$I_F = 20 \text{ mA}$	$t_r, t_f$		15		ns

\*measured after 30s current flow





## Remarks concerning optical radiation safety\*

At maximum forward current and continuous operation, this LED may be classified as LED product *Class 2*, according to standard IEC 60825-1:A2. *Class 2* products emit in the visible region, damaging exposure is usually prevented through avert reactions including blink reflex. It can be expected that these reactions provide sufficient protection under reasonably predictable conditions. This also 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.

