



## ELC-660-23-1

- LED bare chip die
- 660 nm



Radiation	Type	Electrodes
Red	DDH	N (cathode) up

	<b>typ. Dimensions (<math>\mu\text{m}</math>)</b>	
	typ. Thickness:	160 ( $\pm 20$ ) $\mu\text{m}$
	cathode:	gold alloy, 1.5 $\mu\text{m}$
	anode:	gold alloy, 0.5 $\mu\text{m}$

### Optical and Electrical Characteristics

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

Parameter	Test cond.	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F = 20\text{mA}$	$V_F$		1.8	2.3	V
Reverse voltage	$I_R = 10\mu\text{A}$	$V_R$	5			V
Radiant power <sup>1</sup>	$I_F = 20\text{mA}$	$\Phi_e$	1.5	1.8		mW
Radiant power <sup>2</sup>	$I_F = 20\text{mA}$	$\Phi_e$		2.8		mW
Luminous intensity <sup>1</sup>	$I_F = 20\text{mA}$	$I_V$	35			mcd
Luminous intensity <sup>2</sup>	$I_F = 20\text{mA}$	$I_V$		55		mcd
Peak wavelength	$I_F = 20\text{mA}$	$\lambda_p$	657	660	663	nm
Spectral bandwidth at 50%	$I_F = 20\text{mA}$	$\Delta\lambda_{0.5}$		25		nm
Switching time	$I_F = 20\text{mA}$	$t_r, t_f$		80/ 90		ns

<sup>1</sup> Measured on bare chip on TO18 header

<sup>2</sup> Measured on epoxy covered chip on TO18 header