

Couplage d'une LED à une fibre optique

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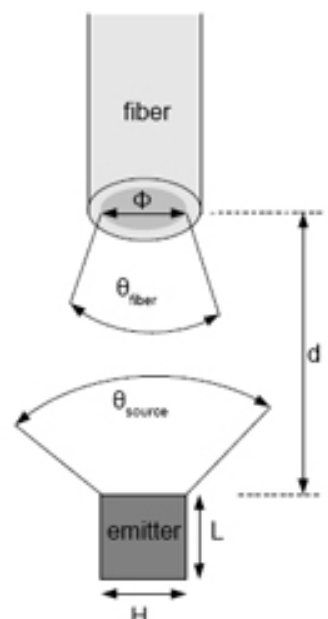
Couplage d'une LED à une fibre optique

- Une LED a généralement une intensité énergétique qui suit une loi de type:

$$I = I_0 \cos^n \theta$$

Ou n peut être déterminé par l'angle ou l'atténuation est de $\frac{1}{2}$, qui est en général donné dans le datasheet.

- Cette LED est parfaitement couplée ($d=0$) avec un fibre dont les indices du coeur et de la gaine sont respectivement 1,492 et 1,47
- Déterminer la paramètre n
- Déterminer la puissance (relative à celle émise totale de la LED) couplée dans la fibre.



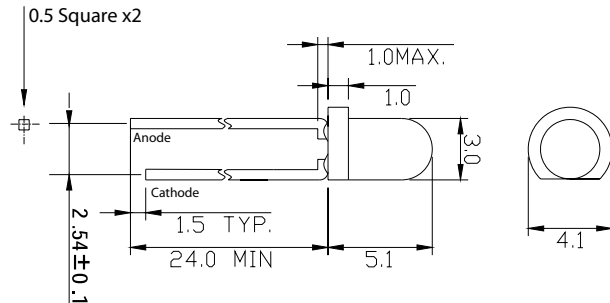
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3.0mm Round InfraRed Lamp

OFL-31 Series

Features:

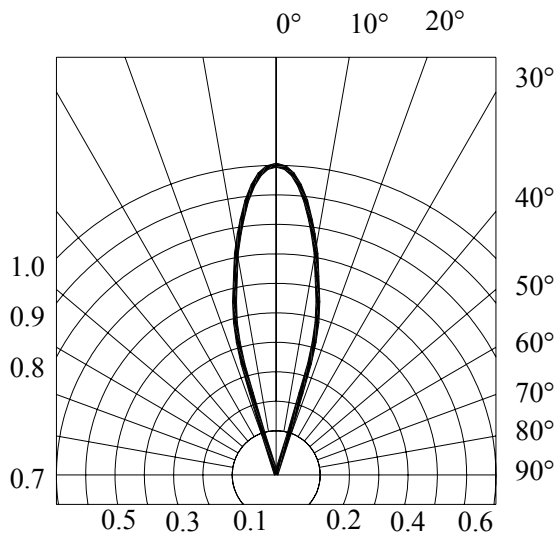
- Standard 3mm Package
- High Radiant Intensity
- Low Forward Voltage



Maximum Ratings at Ta=25°C

Reverse Voltage (<math><100\mu A</math>)	5.0V
D.C. Forward Current	50mA
Pulse Current (Pulse Width of 0.1ms, 1/10 Duty Cycle)	200mA
Operating Temperature Range	-25 to +85°C
Storage Temperature Range	-40 to +100°C
Soldering Temperature Dip Soldering	260°C for 5 secs
Soldering Temperature Hand Soldering	350°C for 3 secs

Typical Electrical / Optical Characteristics Curves:



Electrical & Optical Characteristics at Ta=25°C

Ant Part No.	Chip			Lens Colour	Dominant Wavelength (nm) at 20mA	Radiant Intensity (mW) at 20mA		Forward Voltage (V) at 20mA		Viewing Angle $2\theta^{1/2}$ (deg)
	Material	Emitted Colour	Brightness			min.	typ.	typ.	max.	
OFL-3102	AlGaAs/GaAs	InfraRed	-	Water Clear	940	7.0	14.0	1.25	1.5	30

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