AFONICS

LE-0001

- Low cost 850nm LED

Performance Highlights

- Minimum 25µW into 50/125µm fibre at I_F=100mA
- Peak wavelength at 850nm
- Bandwidth of >50MHz

LIMITING VALUES	SYMBOL	VALUE	UNITS
Continuous forward current (1)	I_F	100	mA
Reverse voltage	V_{RL}	1.0	V
Operating temperature	T_{amb}	-40 to +100	°C
Storage temperature	T_{stg}	-55 to +115	°C
Soldering temperature 2mm from case for 5s	T_{sld}	240	°C

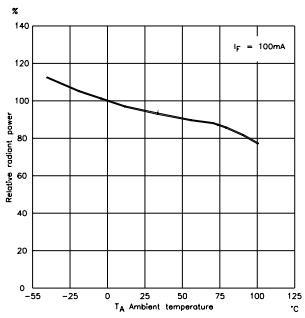
OPTICAL/ELECTRICAL CHARACTERISTICS	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITION
Power (50/125µm Graded Index) (62.5/125µm Graded Index) (100/125µm Graded Index) (200/125µm Step Index Plastic Clad Silica)	P_F	25	29 89 200 750		µW	I_F = 100mA DC
Peak emission wavelength	λ_P	830	850	870	nm	I_F = 50 mA
Spectral bandwidth between half power points	$\Delta\lambda$		35		nm	I_F = 50 mA
Output rise time (2)	t_{Lr}		6.0	8.0	ns	I_F = 100 mA
Output fall time (3)	t_{Lf}		6.0	10.0	ns	I_F = 100 mA
Forward voltage	V_F		1.7	2.0	V	I_F = 100 mA

All values apply at a temperature of 25°C

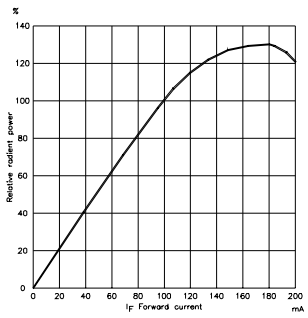
NOTES:

1) Linearly derate at 1.0mA/ºC above 25ºC.
2) 10% to 90% with a 5mA prebias current.
3) 90% to 10% with a 5mA prebias current.

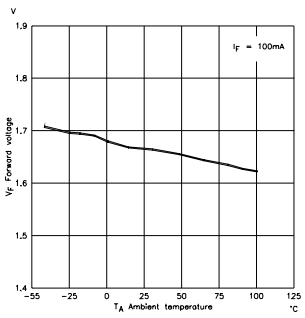
GRAPHS SHOWING TYPICAL CHARACTERISTICS



Relative radiant power
vs ambient temperature



Relative radiant power
vs forward current



Forward voltage
vs ambient temperature

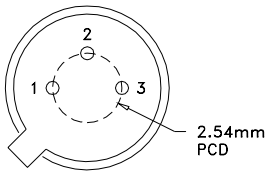
PINOUT DETAILS

1 = Anode

2 = Cathode

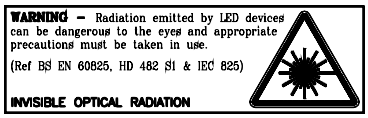
3 = Case

Pin Length = 12mm



REAR VIEW

INTERNAL CIRCUIT



NOTE: The device is very susceptible to damage by electrostatic discharge.

NOTES:

1) Standard pin orientation aligns pin 2 with the receptacle keyway unless a custom orientation is requested.
2) The heatsink tab is removed to allow alignment in some receptacles.
3) Usable pin length will vary dependant on choice of receptacle. If pin length is important please contact Afonics before placing an order.

