LE-0009

AFONICS

- 860nm LED
- High performance
- General purpose

Performance Highlights

- Typically 45µW into 50/125µm fibre at I_F=60mA
- Peak wavelength at 860nm
- Bandwidth of 70MHz

LIMITING VALUES	SYMBOL	VALUE	UNITS
Continuous forward current	I_F	80	mA
Repetitive peak forward current, 50% duty cycle	I_{FRM}	130	mA
Peak forward surge current @ 100µs pulse duration	I_{FSM}	500	mA
Reverse voltage	V_{RL}	1.5	V
Operating temperature	T_{amb}	-55 to +125	°C
Storage temperature	T_{stg}	-55 to +125	°C
Soldering temperature 2mm from case for 10s	T_{sld}	260	°C

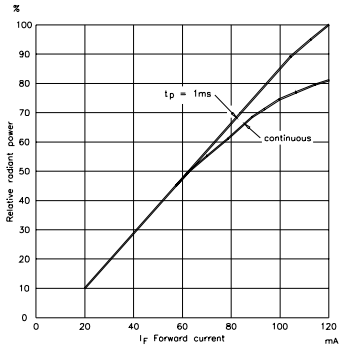
THERMAL CHARACTERISTICS	SYMBOL	VALUE	UNITS
Thermal resistance total	R_{THJT}	350 (typ)	ºC/W
Radiant power temperature coefficient	dP/dT_j	-0.5 (typ)	%/ºC
Wavelength temperature coefficient	$d\lambda/dT_j$	0.3 (typ)	nm/ºC

OPTICAL/ELECTRICAL CHARACTERISTICS	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITION
Power (50/125µm NA 0.20) (62.5/125µm NA 0.27) (100/140µm NA 0.29) (200/230µm NA 0.37)	P_F	25	45 95 210 440		µW	I_F = 60mA DC
Peak emission wavelength	λ_P	840	860	880	nm	I_F = 60mA
Spectral bandwidth between half power points	$\Delta\lambda$		50		nm	I_F = 60mA
Rise / fall time (10% to 90%)	t_{Lr} / t_{Lf}		5	7	ns	I_F = 60mA
Bandwidth	f_C		70		MHz	I_F = 60mA
Forward voltage	V_F		1.7	1.9	V	I_F = 60 mA
Capacitance	C		250		pF	V_R = 0V, f = 1MHz
Reverse current	I_R			20	µA	V_R = 1V

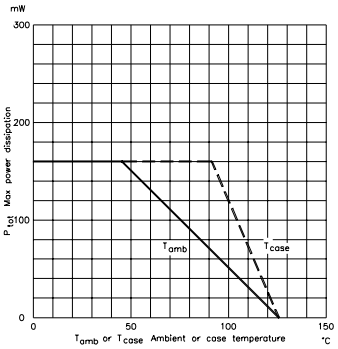
All values apply at a temperature of 25°C

AFONICS

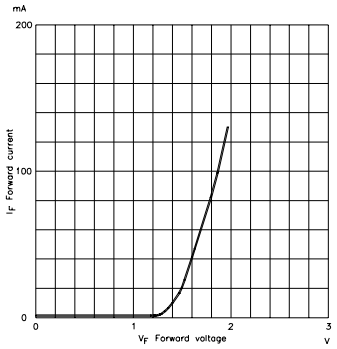
GRAPHS SHOWING TYPICAL CHARACTERISTICS



Relative radiant power
vs forward current



Maximum power dissipation
vs ambient or case temperature



Forward current
vs forward voltage

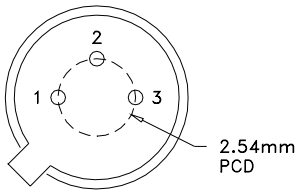
PINOUT DETAILS

1 = Cathode

2 = Case

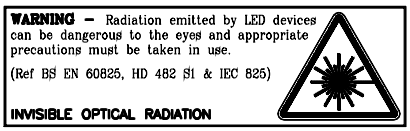
3 = Anode

Pin Length = 14mm



REAR VIEW

INTERNAL CIRCUIT



NOTES: 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.

