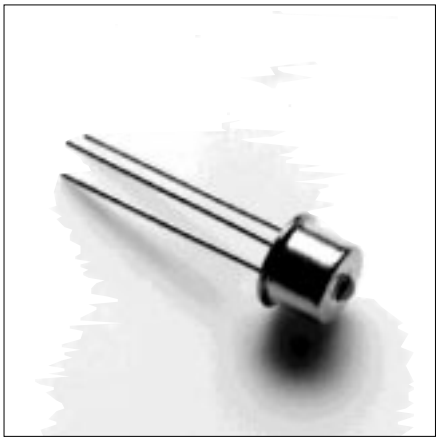
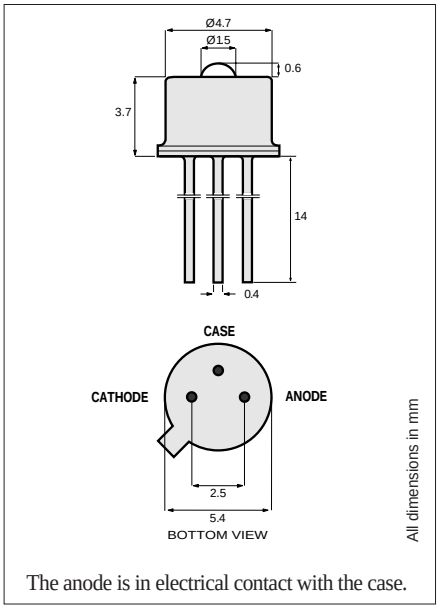
1300nm 1A398 High-Performance LED

Test Equipment

The strictly defined 1300 nm wavelength and high power is ideal for test equipment applications. It is packaged in a hermetically sealed can for high reliability and maximum resistance to harsh operating environments. The double-lens optical system results in optimum coupling of power into the fiber.





TO-46 Package With Lens

Optical and Electrical Characteristics (25° C Case Temperature)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION	
Fiber-Coupled Power	P_{fiber}	50	60		µW	I_F=75mA (Note 1)	Fiber: 62.5/125µm Graded Index NA=0.275
Rise and Fall Time (10-90%)	t_r, t_f		10		ns	I_F=75mA (no bias)	
Bandwidth ($3dB_{el}$)	f_c		35		MHz	I_F=75mA	
Center Wavelength	λ_c	1280	1300	1320	nm	I_F=75mA	
Spectral Width (FWHM)	$\Delta\lambda$		140	155	nm	I_F=75mA	
Forward Voltage	V_F		1.5	2	V	I_F=75mA	
Reverse Current	I_R			100	µA	V_R=1V	
Capacitance	C		200		pF	V_R= 0V, f=1 MHz	

Note 1: Measured at the exit of 100 meters of fiber.

Absolute Maximum Ratings

PARAMETER	SYMBOL	LIMIT
Storage Temperature	T_{stg}	-55 to +125°C
Operating Temperature	T_{op}	-55 to +125°C
Electrical Power Dissipation	P_{tot}	230 mW
Continuous Forward Current (f≤10 kHz)	I_F	110 mA
Peak Forward Current (duty cycle≤50%, f≥1 MHz)	I_{FRM}	170 mA
Reverse Voltage	V_R	1.5 V
Soldering Temperature (2mm from the case for 10 sec)	T_{sld}	260°C

Thermal Characteristics

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT
Thermal Resistance - Infinite Heat Sink	R_{thjc}			150	°C/W
Thermal Resistance - No Heat Sink	R_{thja}			450	°C/W
Temperature Coefficient - Optical Power	dP/dT_j		-0.6		%/°C
Temperature Coefficient - Wavelength	$d\lambda/dT_j$		0.55		nm/°C
Temperature Coefficient - Spectral Width	$d\Delta\lambda/dT_j$		0.25		nm/°C

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