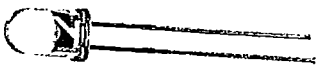
OPTO TECHNOLOGY

GaA1As INFRARED EMITTER

TYPE OTL 304

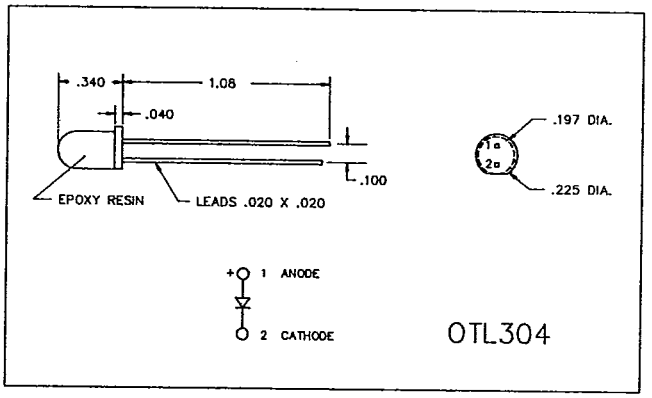


Features

- Low cost
- Plastic T1-3/4 package
- High power output

Description

The OTL 304 series are high power GaA1As LEDs mounted in a clear plastic T1-¾ package. With lensed package and cup type frame, these devices offer a narrow beam angle with high output power. The wavelength is centered at 880 nm and closely matches the spectral response of silicon phototransistors. The OTL 304N has a half intensity beam angle of 20 degrees and the OTL 304W a half angle of 60 degrees.

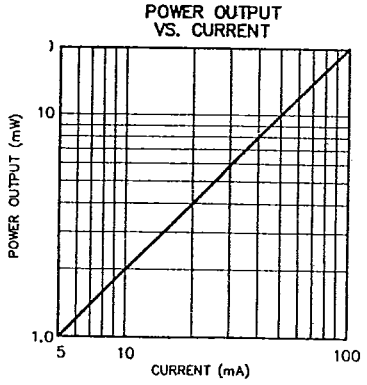


Absolute Maximum Ratings[3]

Reverse Voltage	4 V
Continuous Forward Current	100 mA
Peak Forward Current (PW = 10μs; 100 H_z)	1 A
Power Dissipation	160 mW[1]
Storage Temperature Range	−30°C to +80°C
Operating Temperature Range	−30°C to +80°C
Lead Soldering Temperature (for 5 sec. with soldering iron)	260°C[2]

Notes:

(1) Derate 2.9 mW/°C above 25°C.
(2) RMA flux is recommended. Duration can be extended for 10 sec. max. when wave soldering.
(3) T_A = 25°C unless otherwise noted.



OPTO TECHNOLOGY INC
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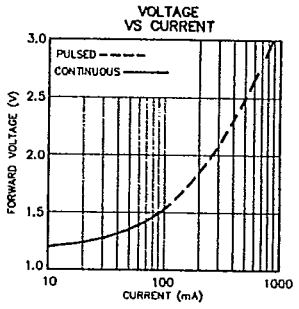
TYPE OTL 304

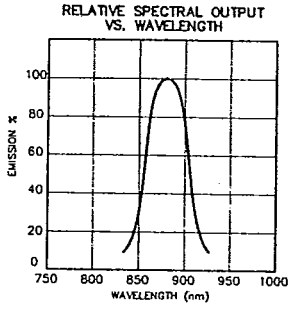
T-41-13

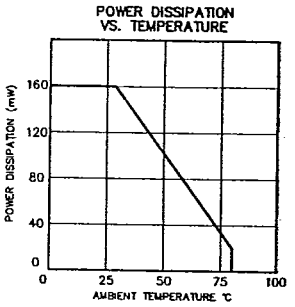
Electrical Characteristics: (25°C)

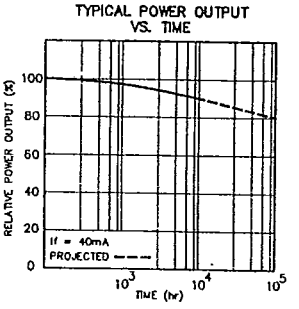
INFRARED EMITTER		SYMBOL	MIN.	TYP.	MAX.	UNITS
Total Power Output $I_F = 25mA$		P_O	4			mW
RADIANT INTENSITY If = 50mA, .01 Sr	OTL 304N(W)-1	I_E	20 (15)			mW/Sr
	OTL 304N(W)-1		25 (18)		45 (36)	
	OTL 304N(W)-1		35 (25)			
Forward Voltage $I_F = 100mA$		V_F		1.6	2.0	V
Reverse Current $V_R = 5V$		I_R			10	µA
Peak Emission Wavelength $I_F = 100mA$		λ_P		880		nm
Spectral Bandwidth @ 50%		$\Delta\lambda$		50		nm
Spectral Shift with Temperature		$\Delta\lambda P/\Delta T$		.30		nm/°C
Half Intensity Beam Angle	OTL 304N	ϕ_H		20		Deg.
	OTL 304W			60		Deg.
Rise or Fall Time		t_r, t_f		500		nS

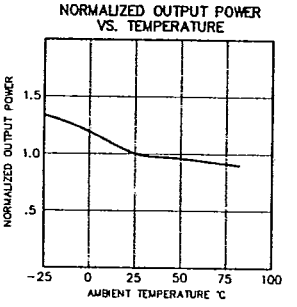
TYPICAL PERFORMANCE CURVES

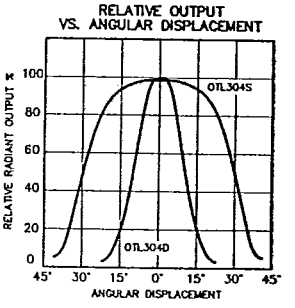












Opto Technology reserves the right to make changes at any time to improve product design and reliability.

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