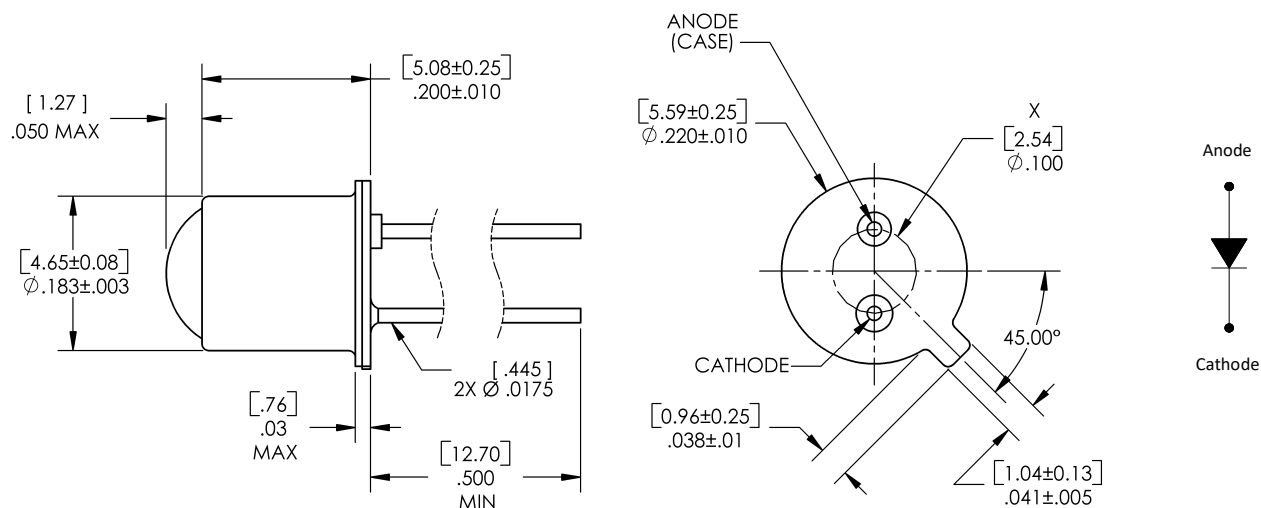


### Electrical Specifications

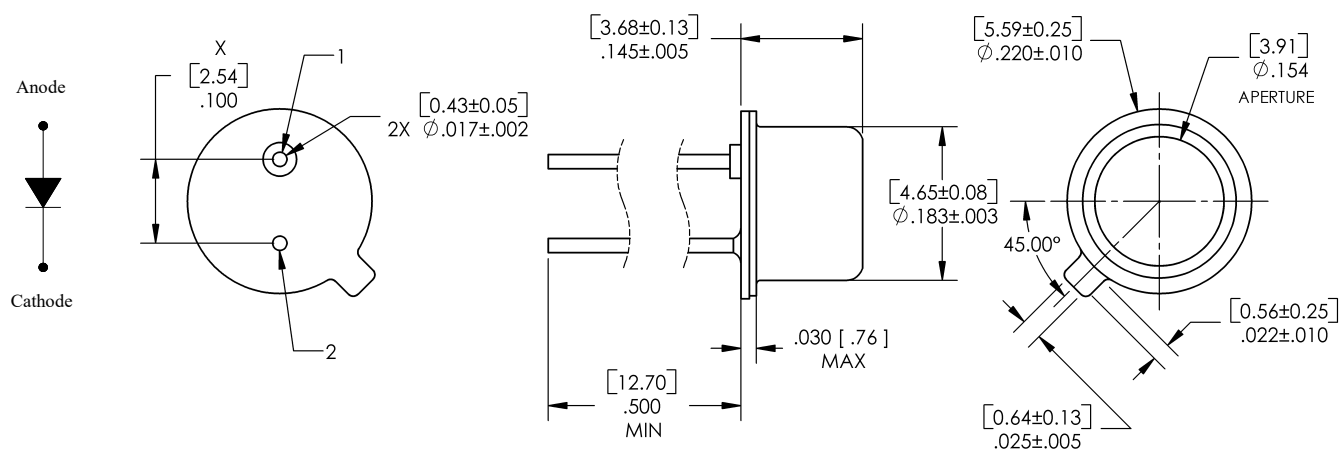
OP130, OP131, OP132, OP133



X THIS DIMENSION CONTROLLED AT HOUSING SURFACE.

DIMENSIONS ARE IN: [MILLIMETERS]  
INCHES

### OP130W and OP133W



X THIS DIMENSION CONTROLLED AT HOUSING SURFACE.

DIMENSIONS ARE IN: [MILLIMETERS]  
INCHES

Pin #	LED
1	Anode
2	Cathode

#### General Note

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### Electrical Specifications

Absolute Maximum Ratings ( $T_A = 25^\circ\text{C}$ unless otherwise noted)	
Storage Temperature Range	$-65^\circ\text{C}$ to $+150^\circ\text{C}$
Operating Temperature Range	$-65^\circ\text{C}$ to $+125^\circ\text{C}$
Reverse Voltage	2.0 V
Continuous Forward Current	100 mA
Peak Forward Current (2 $\mu\text{s}$ pulse width, 0.1% duty cycle)	10.0 A
Lead Soldering Temperature [1/16 inch (1.6 mm) from case for 5 seconds with soldering iron]	$260^\circ\text{C}^{(1)(2)}$
Power Dissipation	200 mW <sup>(3)</sup>

Electrical Characteristics ( $T_A = 25^\circ\text{C}$ unless otherwise noted)						
SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
$P_O$	Radiant Power Output					
	OP130, OP130W	1.0	-	-		$I_F = 100\text{ mA}^{(3)}$
	OP131	3.0	-	-	mW	
	OP132	4.0	-	-		
	OP133, OP133W	5.0	-	-		
$V_F$	Forward Voltage	-	-	1.75	V	$I_F = 100\text{ mA}^{(3)}$
$I_R$	Reverse Current	-	-	100	$\mu\text{A}$	$V_R = 2.0\text{ V}$
$\lambda_P$	Wavelength at Peak Emission	-	935	-	nm	$I_F = 10\text{ mA}$
$\beta$	Spectral Bandwidth between Half Power Points	-	50	-	nm	$I_F = 10\text{ mA}$

Notes:

1. RMA flux is recommended. Duration can be extended to 10 seconds maximum when flow soldering.
2. Derate linearly 2.0 mW/ $^\circ\text{C}$  above  $25^\circ\text{C}$ .
3. Measurement made with 100  $\mu\text{s}$  pulse measured at the trailing edge of the pulse with a duty cycle of 0.1% and an  $I_F = 100\text{ mA}$ .

Electrical Characteristics ( $T_A = 25^\circ\text{C}$ unless otherwise noted—for reference only)						
SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
$\Delta\lambda_P/\Delta T$	Spectral Shift with Temperature	-	+0.30	-	nm/ $^\circ\text{C}$	$I_F = \text{Constant}$
$\theta_{HP}$	Emission Angle at Half Power Points					$I_F = 100\text{ mA}$
	OP130 series	-	18	-	Degree	
	OP130W series	-	50	-		
$t_r$	Output Rise Time	-	1000	-	ns	$I_{F(PK)} = 100\text{ mA}$ , $PW = 10\text{ }\mu\text{s}$ , and D.C. = 10.0%
$t_f$	Output Fall Time	-	500	-	ns	

General Note

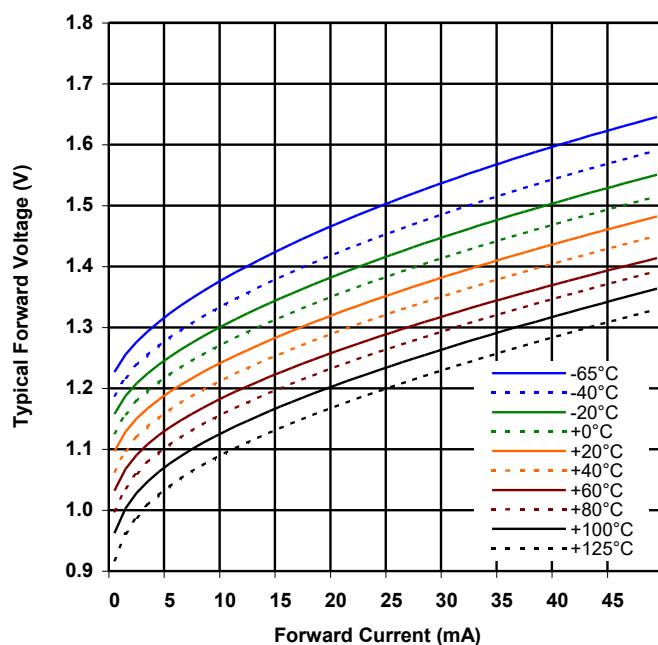
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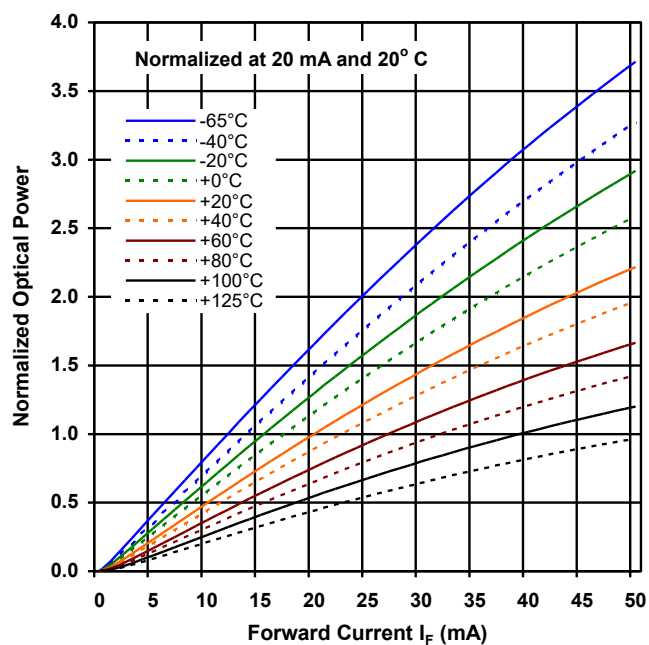
### Performance

OP130 Series (including "W" devices)

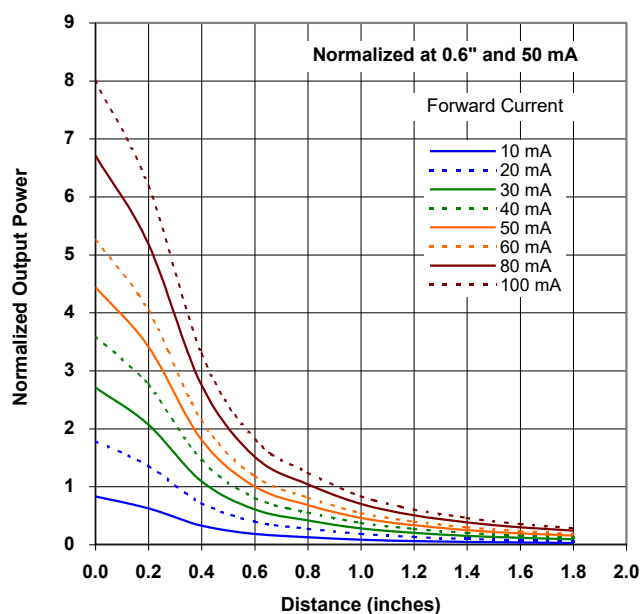
Forward Voltage vs Forward Current vs Temperature



Optical Power vs  $I_F$  vs Temp



Distance vs Output Power vs Forward Current



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