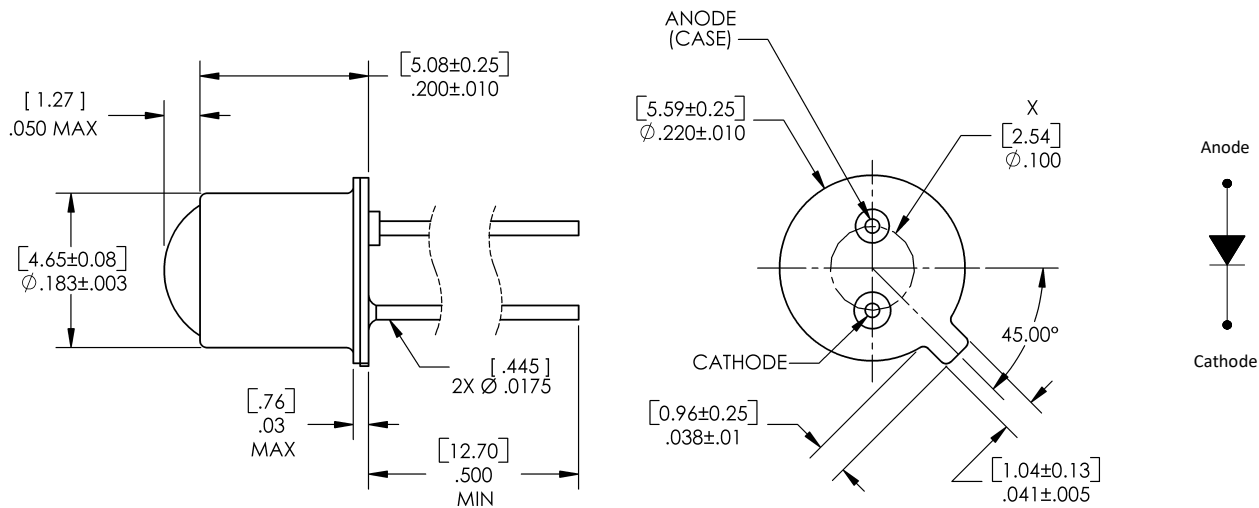


Electrical Specifications

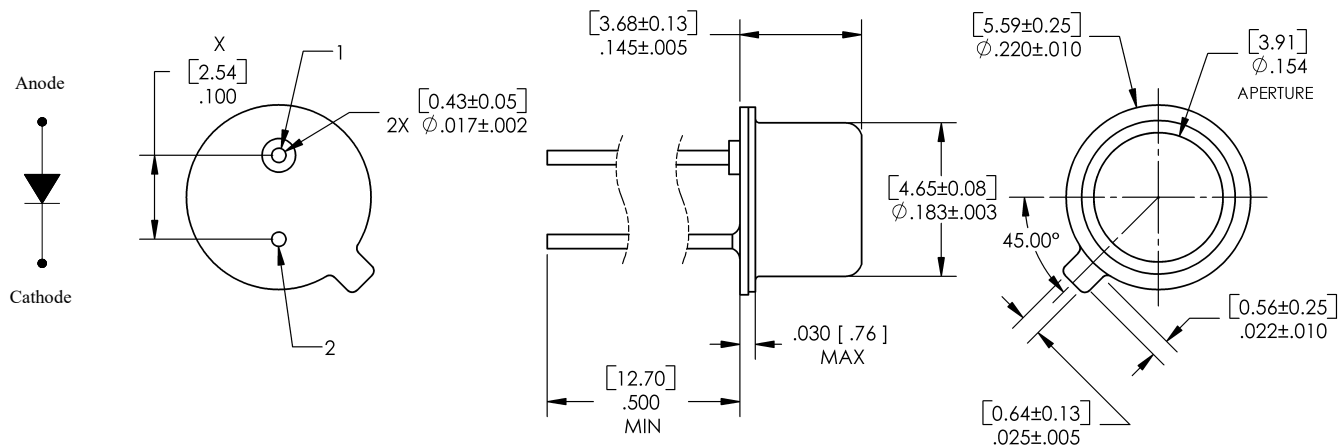
OP130, OP131, OP132, OP133



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

TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

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Electrical Specifications

Absolute Maximum Ratings ($T_A = 25^\circ\text{C}$ unless otherwise noted)	
Storage Temperature Range	-65°C to $+150^\circ\text{C}$
Operating Temperature Range	-65°C to $+125^\circ\text{C}$
Reverse Voltage	2.0 V
Continuous Forward Current	100 mA
Peak Forward Current (2 μs 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	$200\text{ mW}^{(3)}$

Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)						
SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
P_O	Radiant Power Output					$I_F = 100\text{ mA}^{(3)}$
	OP130, OP130W	1.0	-	-	mW	
	OP131	3.0	-	-		
	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	μA	$V_R = 2.0\text{ V}$
λ_P	Wavelength at Peak Emission	-	935	-	nm	$I_F = 10\text{ mA}$
β	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 $2.0\text{ mW}/^\circ\text{C}$ above 25°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	-	$\text{nm}/^\circ\text{C}$	$I_F = \text{Constant}$
θ_{HP}	Emission Angle at Half Power Points				Degree	$I_F = 100\text{ mA}$
	OP130 series	-	18	-		
	OP130W series	-	50	-		
t_r	Output Rise Time	-	1000	-	ns	$I_{F(PK)} = 100\text{ mA}$, $PW = 10\ \mu\text{s}$, and $D.C. = 10.0\%$
t_f	Output Fall Time	-	500	-	ns	

General Note

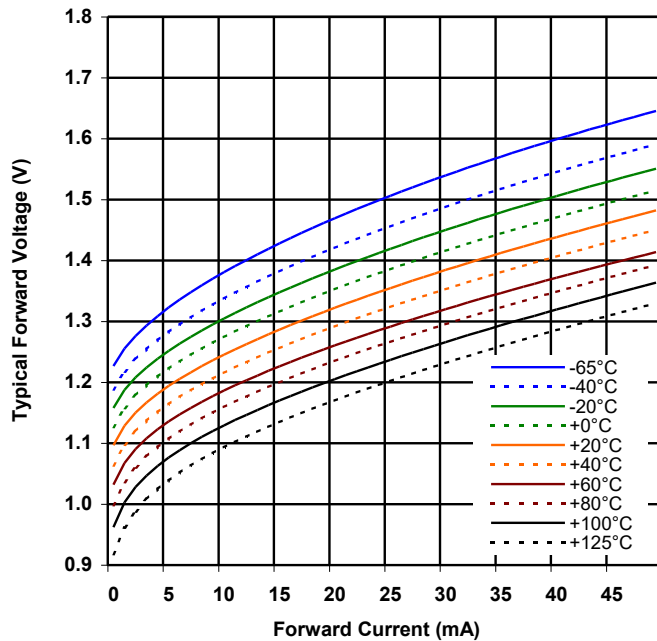
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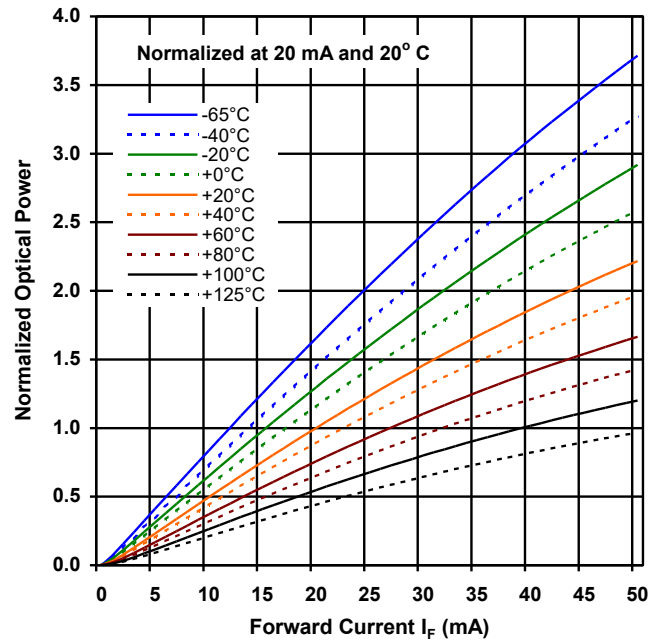
Performance

OP130 Series (including "W" devices)

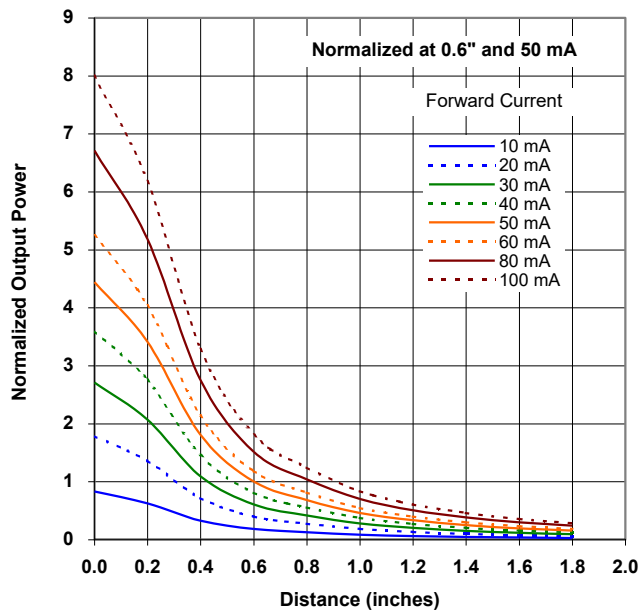
Forward Voltage vs Forward Current vs Temperature



Optical Power vs I_F vs Temp



Distance vs Output Power vs Forward Current



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