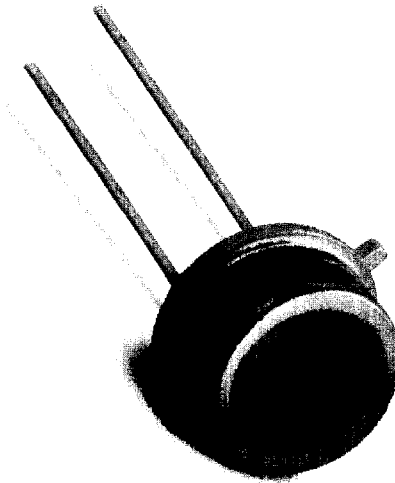


Silicon Sensors offers a wide variety of hermetically sealed TO packages. Available products come in standard, low capacitance, blue enhanced and UV enhanced cells in TO-18, TO-5 and TO-8 packages. These devices are fabricated with state-of-the-art technology and offer wide dynamic range, high signal-to-noise ratio, minimum response times and superior sensitivity from 250-1100 nm. The planar process technology provides extremely low dark currents to enhance signal-to-noise characteristics allowing these devices to be used in either photovoltaic or photoconductive modes.



- ### APPLICATIONS
- Laser Positioning Systems
 - Graphics Scanners
 - Medical Instrumentation
 - Counters
 - Fiber Optics
 - Densitometers
 - Radiometers
 - Analytical Instrumentation
 - Colorimeters
 - Spectrometers

The TO-packaged components can be fabricated to different configurations to include caps with optical filters, visible (BG18) or near infrared (GR850) transmission, or in low profile cans to meet critical spatial constraints.

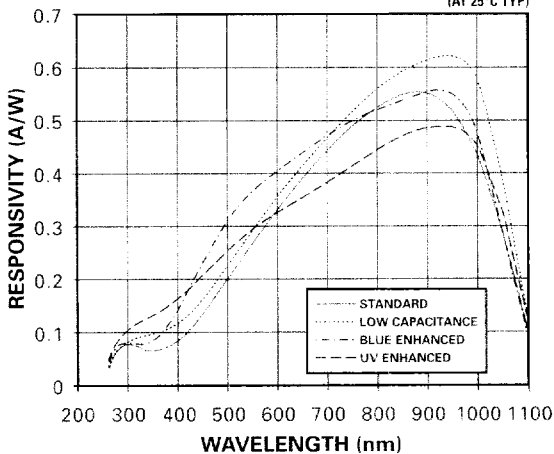
Available in bi-cell and quad-cell versions (page 13).

TO-PACKAGE PERFORMANCE SPECIFICATIONS (AT 25°C TYPICAL)

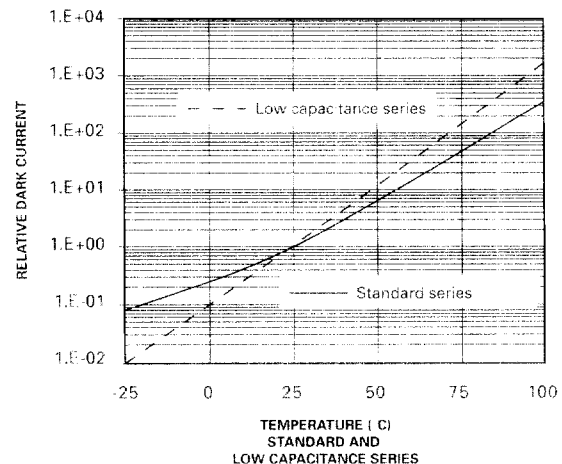
	DEVICE	SPECTRAL RESPONSIVITY					I_{sc} (μA) Tungsten 10mW/cm ²	DARK CURRENT		SHUNT RESISTANCE		BREAKDOWN VOLTAGE (Volts) $I_{pd}=10\mu A$	JUNCTION RISETIME (ns) $V_i=5V$ 50 ohm	CAPACITANCE		
		(A/W) typ.						(pA) $V_i=10V$		(Gohm) $V_i=10mV$				(pF) 10 kHz		
		340	440	632	880	920		Typ.	Max	Typ.	Min.			50 ohm	0V	10V
		(nm)			—(peak)—											
STANDARD SERIES	ST-TO-18	-	-	0.36	0.55	-	60	25	125	20	2	50	300	155	40	
	ST-TO-5	-	-	0.36	0.55	-	500	230	1150	5	0.5	50	300	1380	350	
	ST-TO-8	-	-	0.36	0.55	-	1200	600	3000	2	0.2	50	300	3620	905	
LOW CAPACITANCE SERIES	LC-TO-18	-	-	0.36	-	0.62	70	200	600	0.5	0.2	80	100	30	6	
	LC-TO-5	-	-	0.36	-	0.62	600	1880	5640	0.1	0.05	80	100	260	52	
	LC-TO-8	-	-	0.36	-	0.62	1600	4800	14400	0.05	0.02	80	100	680	140	
BLUE ENHANCED SERIES	BL-TO-18	-	0.22	0.43	-	0.55	70	200	600	0.5	0.2	80	100	30	6	
	BL-TO-5	-	0.22	0.43	-	0.55	600	1880	5640	0.1	0.05	80	100	260	52	
	BL-TO-8	-	0.22	0.43	-	0.55	1600	4800	14400	0.05	0.02	80	100	680	140	
UV ENHANCED SERIES	UV-TO-18	0.13	-	0.33	-	0.48	60	200	600	0.5	0.02	80	100	30	6	
	UV-TO-5	0.13	-	0.33	-	0.48	530	1690	5640	0.1	0.05	80	100	260	52	
	UV-TO-8	0.13	-	0.33	-	0.48	1400	4800	14400	0.05	0.02	80	100	680	140	

SPECTRAL RESPONSIVITY

(AT 25°C TYP)



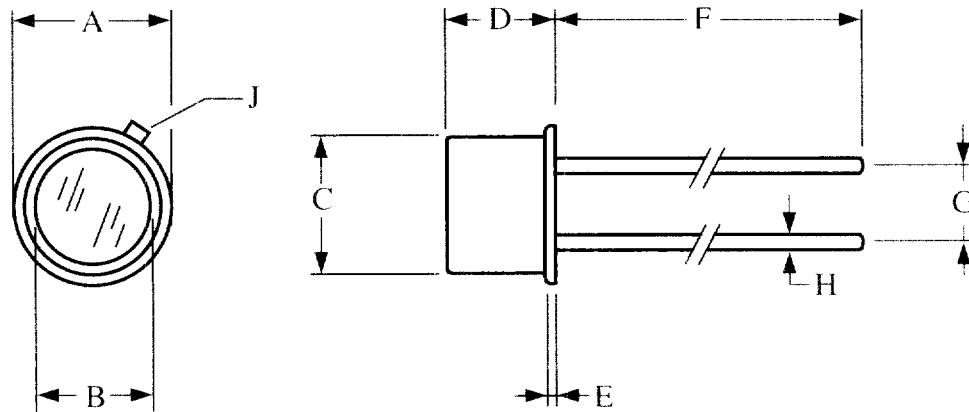
RELATIVE DARK CURRENT Vs. TEMPERATURE (Relative to 25°C)



MULTI-SEGMENT TO-PACKAGE PERFORMANCE SPECIFICATIONS (AT 25°C TYPICAL)

	DEVICE	SPECTRAL RESPONSIVITY			I _{sc} (μ A)	DARK CURRENT		SHUNT RESISTANCE		BREAKDOWN VOLTAGE	RISETIME	JUNCTION CAPACITANCE		CROSSTALK (%)
		(A/W) typ.				Tungsten 10mW/cm ²	(pA)		(Gohm)		(Volts)	(ns)	(pF)	
		632	880	920	V _r =10V		V _r =10mV	I _{bd} =10 μ A	V _r =5V	10 kHz				
		(nm)	---(peak)---											
STANDARD MULTI-SEGMENT TO-5	BI-ST-TO-5	0.36	0.55	-	160	70	350	5	0.5	50	300	440	110	<0.5
	CQ-ST-TO-5	0.36	0.55	-	70	35	175	10	1	50	300	220	55	<0.5
	SQ-ST-TO-5	0.36	0.55	-	80	40	200	10	1	50	300	220	55	<0.5
LOW CAPACITANCE MULTI-SEGMENT TO-5	BI-LC-TO-5	0.38	-	0.62	190	570	1710	0.2	0.05	80	100	150	30	<1
	CQ-LC-TO-5	0.38	-	0.62	85	260	780	0.4	0.1	80	100	75	15	<1
	SQ-LC-TO-5	0.38	-	0.62	95	290	870	0.4	0.1	80	100	75	15	<1
STANDARD MULTI-SEGMENT TO-8	BI-ST-TO-8	0.36	0.55	-	600	250	1250	2	0.2	50	300	1440	360	<0.5
	CQ-ST-TO-8	0.36	0.55	-	260	100	500	4	0.4	50	300	720	180	<0.5
	SQ-ST-TO-8	0.36	0.55	-	300	120	600	4	0.4	50	300	720	180	<0.5
LOW CAPACITANCE MULTI-SEGMENT TO-8	BI-LC-TO-8	0.38	-	0.62	680	2000	6000	0.1	0.02	80	100	300	60	<1
	CQ-LC-TO-8	0.38	-	0.62	300	800	2400	0.2	0.04	80	100	150	30	<1
	SQ-LC-TO-8	0.38	-	0.62	340	950	2850	0.2	0.04	80	100	150	30	<1

NOTE: BI indicates BI-CELL, CQ indicates QUAD-CELL with circular active area and SQ indicates QUAD-CELL with square active area.



PACKAGE DIMENSIONS

	A inches (mm)	B inches (mm)	C inches (mm)	D inches (mm)	E inches (mm)	F inches (mm)	G inches (mm)	H inches (mm)	J inches (mm)
TO18	0.210 (5.33)	0.154 (3.91)	0.134 (4.67)	0.206 (5.23)	0.019 (0.482)	1.0 (25.4)	0.100 (2.54)	0.017 (0.432)	0.040 x 0.040 (1.02 x 1.02)
TO5	0.360 (9.14)	0.250 (6.35)	0.325 (8.26)	0.270 (6.86)	0.040 (1.02)	1.5 (38.1)	0.200 (5.08)	0.018 (0.457)	0.030 x 0.030 (0.762 x 0.762)
TO8	0.550 (13.97)	0.430 (10.92)	0.495 (12.32)	0.200 (5.08)	0.032 (0.813)	1.5 (38.1)	0.295 (7.49)	0.018 (0.457)	N/A