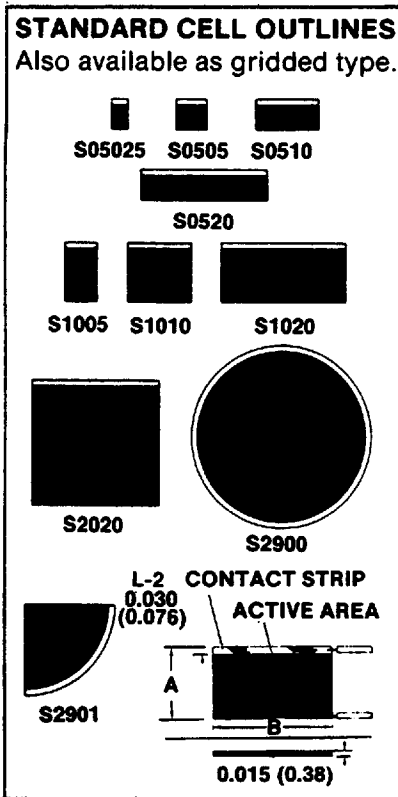


SILICON PHOTOCELL SENSORS

TOI silicon photocells are employed in photometer, switching, position detection, tape and disc EOT-BOT sensing, solar energy conversion, and other numerous applications. Silicon photosensors with special geometries, spectral response and switching characteristics, are available on a custom basis, and are widely used in the optical encoder, character recognition, and optical instrumentation fields.



Standard Size Part Numbers	Cell Dimensions		Photo Active Area		(1) Test Voltage (Volts)
	in.	cm.	in. ²	cm ²	
S05025	0.20 x 0.10	0.5 x 0.25	.017	0.1	.43
S0505	0.20 x 0.20	0.5 x 0.5	.034	0.2	.43
S0510	0.20 x 0.40	0.5 x 1.0	.068	0.4	.43
S0520	0.20 x 0.80	0.5 x 2.0	.136	0.8	.43
S1005	0.40 x 0.20	1.0 x 0.5	.074	0.4	.43
S1010	0.40 x 0.40	1.0 x 1.0	.148	0.9	.43
S1020	0.40 x 0.80	1.0 x 2.0	.296	1.9	.43
S2020	0.80 x 0.80	2.0 x 2.0	.620	3.8	.43
S2900	1.125 Dia.	2.86	.88	5.7	.43
S2901	Quarter Section of S2900	—	.22	1.4	.43

NOTE: (1) Irradiance: 100 mW/cm², AM1 solar radiation.

Part Number Code for Ordering Silicon Light Sensors

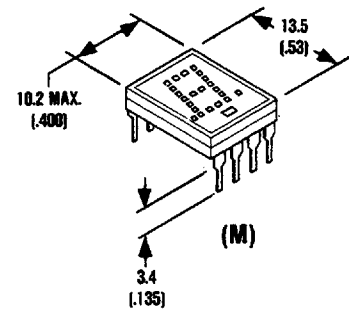
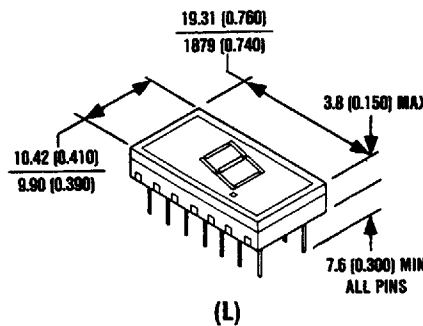
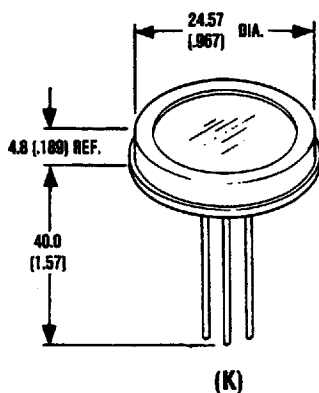
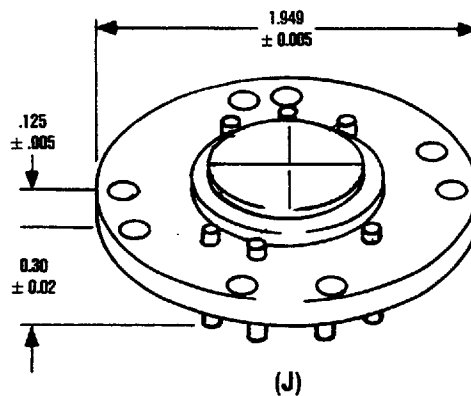
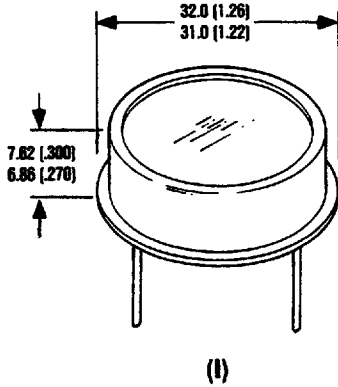
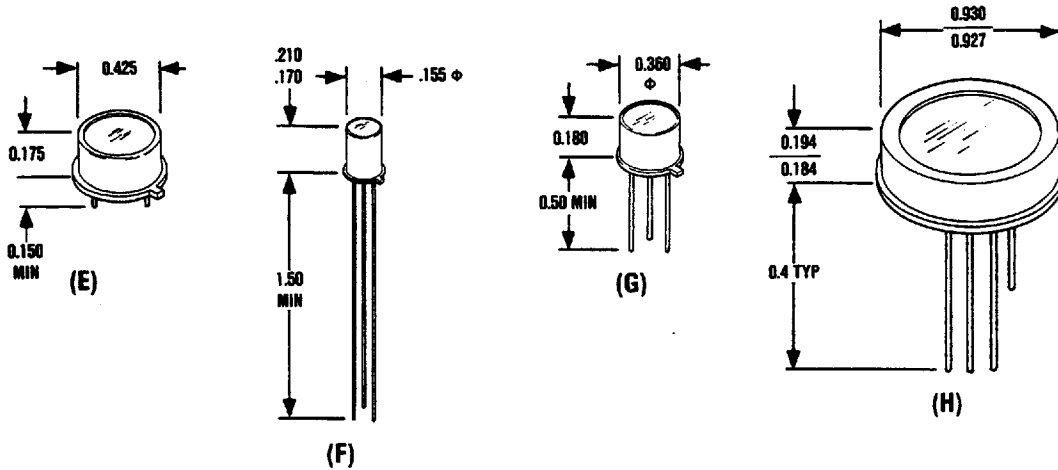
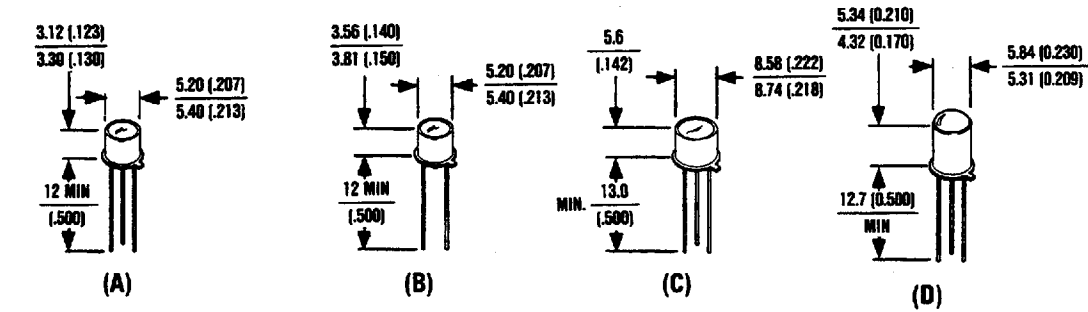
EXAMPLE:

S	05	05	G	E	6	PL
Silicon	"A" Width	"B" Length	Gridded Type	Device Type	Minimum Conversion Efficiency	Leads If Desired
(Outline L-2)	05 = 0.20" (0.5 cm) 10 = 0.40" (1.0 cm) 20 = 0.80" (2.0 cm)		Add "G" for cells 0.4" x 0.4" (1.0 x 1.0 cm) and larger	"E" P on N	5% to 10% (6 = 6%, etc.)	PL — (Pigtail Leads)

TYPICAL PERFORMANCE CHARACTERISTICS

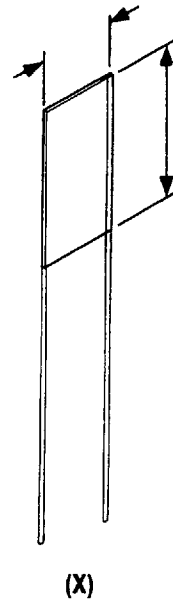
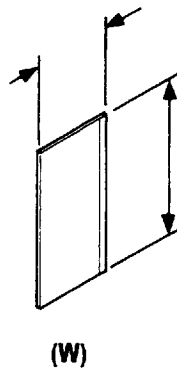
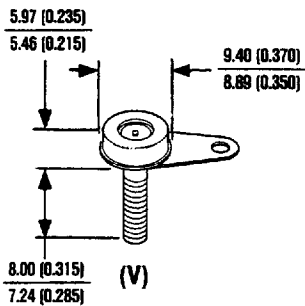
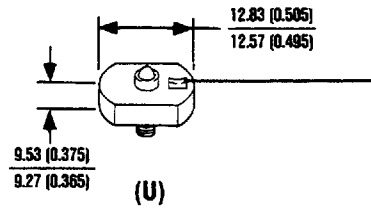
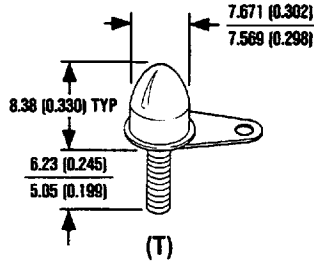
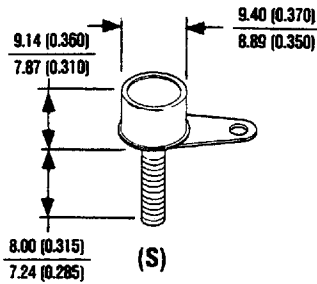
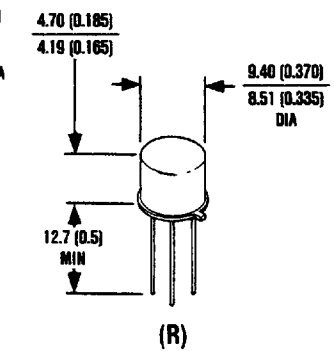
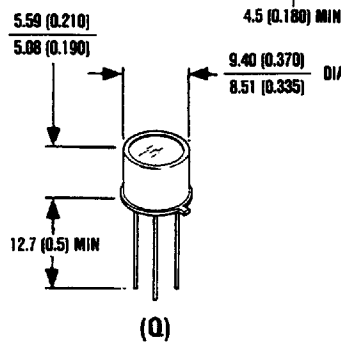
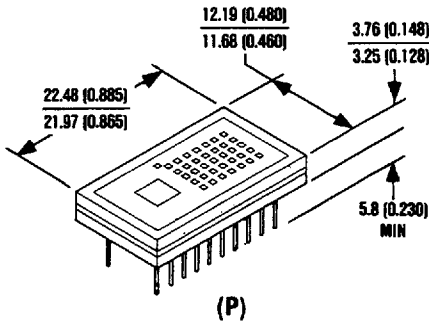
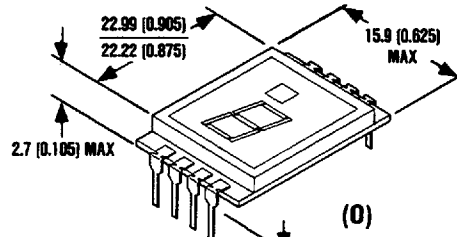
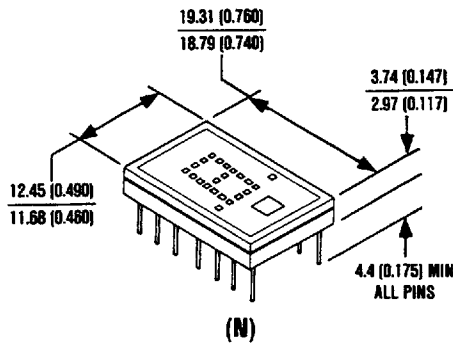
STANDARD SILICON PHOTOCELL								
Parameter	Symbol	Unit	Test Condition	S05025	S0505	S0510	S0520	S1005
Short Circuit Current	I _{SC}	mA	100 mW/cm ² , AM1 Solar Radiation	1.8	3.8	7.5	15.0	7.5
Short Circuit Current	I _{SC}	mA	100 fc, Tungsten @ 2870°K	0.07	0.13	0.27	0.54	0.27
Open Circuit Voltage	V _{OC}	Volts	100 mW/cm ² , AM1 Solar Radiation	0.43	0.43	0.43	0.43	0.43
Forward Voltage	V _F	Volts	I _F = 1 mA	0.50	0.50	0.42	0.42	0.42
Dark Current	I _D	μA	V _R = 0.1 V	0.3	0.5	0.6	0.8	0.6
Capacitance	C _T	pF	V _R = 0 V	1.5	2.4	5.0	10.0	5.0
Responsivity	R _e	A/W	λ _p = 900 nm	0.48	0.48	0.48	0.48	0.48

STANDARD SILICON PHOTOCELL (Continued)								
Parameter	Symbol	Unit	Test Condition	S1010	S1020	S2020	S2900	S2901
Short Circuit Current	I _{SC}	mA	100 mW/cm ² , AM1 Solar Radiation	17.0	35.0	72.0	105.0	27.0
Short Circuit Current	I _{SC}	mA	100 fc, Tungsten @ 2870°K	0.55	1.10	2.2	3.3	0.8
Open Circuit Voltage	V _{OC}	Volts	100 mW/cm ² , AM1 Solar Radiation	0.43	0.43	0.43	0.43	0.43
Forward Voltage	V _F	Volts	I _F = 1 mA	0.42	0.40	0.30	0.25	0.40
Dark Current	I _D	μA	V _R = 0.1 V	0.8	1.8	25.0	100.0	100.0
Capacitance	C _T	pF	V _R = 0 V	20.0	25.0	70.0	90.0	25.0
Responsivity	R _e	A/W	λ _p = 900 nm	0.48	0.48	0.48	0.48	0.48



Right or left decimal optional

E



F