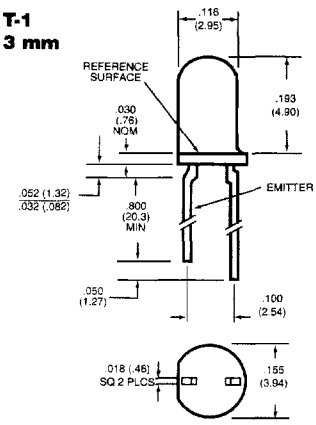
QT OPTOELECTRONICS

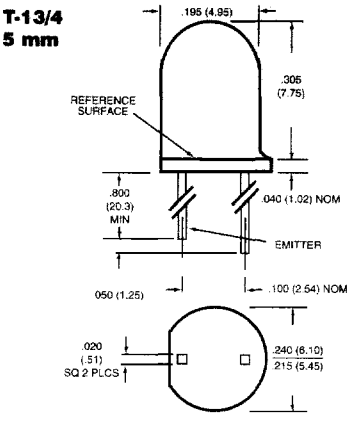
PLASTIC SILICON INFRARED PHOTOSENSORS

T-1
3 mm



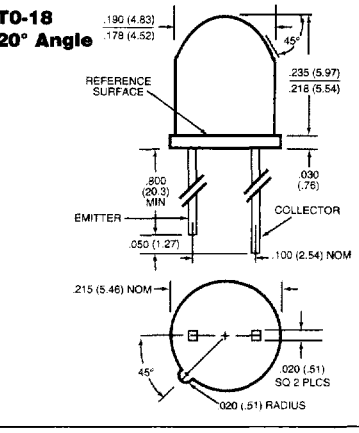
Part Number	Reception Angle 1/2 Sensitivity	$I_{C(ON)}$ min	$I_{C(ON)}$ max	units	BV_{CEO} (V) min	I_{CEO}/V_{CE} (nA)/(V) max	Notes
Phototransistor							
QSC112	±8°	1.00	4.00	mA	30	100/10	1
QSC113	±8°	2.40	9.60	mA	30	100/10	1
QSC114	±8°	4.00	—	mA	30	100/10	1
Photodarlington							
QSC133	±8°	8.00	—	mA	30	100/10	3,6,7

T-13/4
5 mm



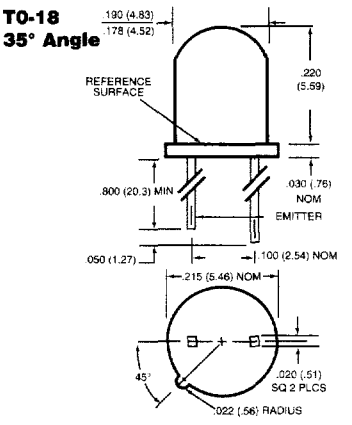
Part Number	Reception Angle 1/2 Sensitivity	$I_{C(ON)}$ min	$I_{C(ON)}$ max	units	BV_{CEO} (V) min	I_{CEO}/V_{CE} (nA)/(V) max	Notes
Phototransistor							
QSD122	±12°	1.00	6.00	mA	30	100/10	1
QSD123	±12°	4.00	16.0	mA	30	100/10	1
QSD124	±12°	6.00	—	mA	30	100/10	1
QSD128	±12°	6.00	—	mA	30	100/10	1,6

TO-18
20° Angle



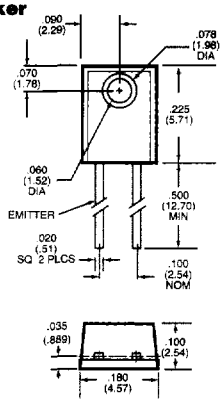
Part Number	Reception Angle 1/2 Sensitivity	$I_{C(ON)}$ min	$I_{C(ON)}$ max	units	BV_{CEO} (V) min	I_{CEO}/V_{CE} (nA)/(V) max	Notes
Phototransistor							
QSD722	±20°	0.60	3.80	mA	30	100/10	1
QSD723	±20°	2.50	10.0	mA	30	100/10	1
QSD724	±20°	3.50	—	mA	30	100/10	1
Photodarlington							
QSD733	±20°	5.00	—	mA	30	100/10	5,7

TO-18
35° Angle



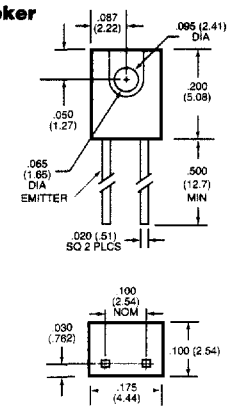
Part Number	Reception Angle 1/2 Sensitivity	$I_{C(ON)}$ min	$I_{C(ON)}$ max	units	BV_{CEO} (V) min	I_{CEO}/V_{CE} (nA)/(V) max	Notes
Phototransistor							
QSD422	±35°	0.30	1.80	mA	30	100/10	1
QSD423	±35°	1.20	4.80	mA	30	100/10	1
QSD424	±35°	1.80	—	mA	30	100/10	1

Sidelooker .070"



Part Number	Reception Angle 1/2 Sensitivity	$I_{C(on)}$ min	$I_{C(on)}$ max	Unit	BV_{CEO} V min	I_{CEO}/V_{CE} nA)/(V max	Notes
Phototransistor							
L14Q1	±35°	1.00	—	mA	30	100/25	4
Photodarlington							
L14R1	±35°	5.00	—	mA	30	100/25	2

Sidelooker .050"



Part Number	Reception Angle 1/2 Sensitivity	$I_{C(on)}$ min	$I_{C(on)}$ max	Unit	BV_{CEO} V min	I_{CEO}/V_{CE} nA)/(V max	Notes
Phototransistor							
QSE113	±25°	0.25	1.50	mA	30	100/10	1
QSE114	±25°	1.00	—	mA	30	100/10	1
QSE122	±25°	3.00	12.0	mA	30	100/10	1
Photodarlington							
QSE133	±25°	9.00	—	mA	30	100/10	3

Notes (Applies to all components on pages 33 and 34.)

1. On-State Collector Current @ E_e = 0.5 mW/cm² (AlGaAs), V_{CE} = 5 V
2. On-State Collector Current @ E_e = 0.3 mW/cm² (GaAs), V_{CE} = 1.5 V
3. On-State Collector Current @ E_e = 0.25 mW/cm² (AlGaAs), V_{CE} = 5 V
4. On-State Collector Current @ E_e = 1.5 mW/cm², (GaAs), V_{CE} = 5 V
5. On-State Collector Current @ E_e = 0.125 mW/cm² (AlGaAs), V_{CE} = 5 V
6. Reverse polarity
7. Orange stripe on the flange

Maximum Ratings Table B (Applies to all components on pages 33 and 34.)

Storage Temperature	–40 to +100° C
Operating Temperature	–40 to +100° C
Soldering:	
Lead Temperature (Iron)	240° C for 5 s
Lead Temperature (Flow)	260° C for 10 s
Collector–Emitter Breakdown Voltage	30 V
Emitter–Collector Breakdown Voltage	
(L14R, QSE133)	6.0 V
(QSX, L14Q)	5.0 V
Power Dissipation	150 mW
Derate linearly at 2.00 mW/° C above 25° C	