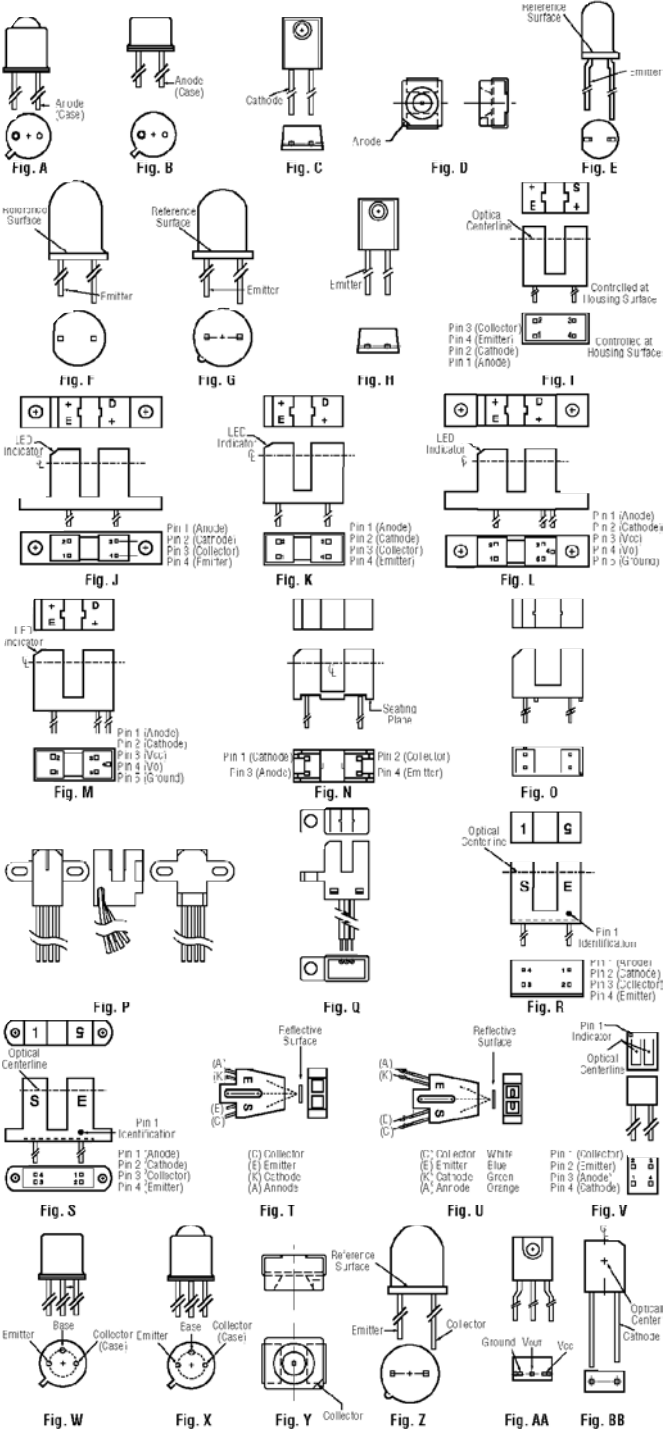


Infrared Emitting Diodes, Switches, and Sensors



Infrared Emitting Diodes

| Mfr.'s Type | Fig. | Power Out Min. | V <sub>r</sub> Max. | Peak Emission Wavelength (nm) | Beam Angle 1/2 Angle (°) |
|-------------|------|----------------|---------------------|-------------------------------|--------------------------|
| 1N6264      | A    | 6.000 mW       | 1.7                 | 940                           | ±10                      |
| 1N6265      | B    | 6.000 mW       | 1.7                 | 940                           | ±40                      |
| 1N6266      | A    | 25.000 mW/sr   | 1.7                 | 940                           | ±10                      |
| F5D1        | A    | 12.000 mW      | 1.7                 | 880                           | ±10                      |
| F5D2        | A    | 9.000 mW       | 1.7                 | 880                           | ±10                      |
| F5D3        | A    | 10.500 mW      | 1.7                 | 880                           | ±10                      |
| F5E1        | B    | 12.000 mW      | 1.7                 | 880                           | ±40                      |
| F5E2        | B    | 9.000 mW       | 1.7                 | 880                           | ±40                      |
| F5E3        | B    | 10.500 mW      | 1.7                 | 880                           | ±40                      |

Infrared Emitting Diodes (continued)

| Mfr.'s Type | Fig. | Power Out Min. | V <sub>r</sub> Max. | Peak Emission Wavelength (nm) | Beam Angle 1/2 Angle (°) |
|-------------|------|----------------|---------------------|-------------------------------|--------------------------|
| F5F1        | C    | 0.280 mW/sr    | 1.7                 | 940                           | ±35                      |
| F5G1        | C    | 0.600 mW/sr    | 1.7                 | 880                           | ±35                      |
| LED558      | A    | 5.400 mW       | 1.7                 | 940                           | ±10                      |
| LED55C      | A    | 5.400 mW       | 1.7                 | 940                           | ±10                      |
| LED56       | A    | 1.500 mW       | 1.7                 | 940                           | ±10                      |
| LED56F      | B    | 1.500 mW       | 1.7                 | 940                           | ±40                      |
| QED421      | D    | 4.000 mW/sr    | 1.8                 | 880                           | ±60                      |
| QEC113      | E    | 14.000 mW/sr   | 1.5                 | 940                           | ±8                       |
| QEC122      | E    | 27.000 mW/sr   | 1.7                 | 880                           | ±8                       |
| QED123      | F    | 80.000 mW/sr   | 1.7                 | 880                           | ±9                       |
| QED222      | F    | 50.000 mW/sr   | 1.7                 | 880                           | ±20                      |
| QED233      | F    | 10.000 mW/sr   | 1.5                 | 940                           | ±20                      |
| QED234      | F    | 27.000 mW/sr   | 1.5                 | 940                           | ±20                      |
| QED522      | G    | 20.000 mW/sr   | 1.7                 | 880                           | ±15                      |
| QED523      | G    | 40.000 mW/sr   | 1.7                 | 880                           | ±15                      |
| QEE113      | H    | 3.000 mW/sr    | 1.5                 | 940                           | ±25                      |
| QEE122      | H    | 4.000 mW/sr    | 1.7                 | 880                           | ±25                      |
| QEE123      | H    | 8.000 mW/sr    | 1.5                 | 880                           | ±25                      |

Slotted Optical Switches

| Mfr.'s Type | Fig. | Output Type              | Min. Output I <sub>c</sub> @ I <sub>f</sub> (mA) | Gap Width (In.) | Lead Spacing (In.) |
|-------------|------|--------------------------|--------------------------------------------------|-----------------|--------------------|
| OPB804      | I    | Transistor               | 0.5 @ 20 mA                                      | 0.150           | 0.300              |
| H21A1       | J    | Transistor               | 1.0 @ 20 mA                                      | 0.124           | 0.284              |
| H22A1       | K    | Transistor               | 1.0 @ 20 mA                                      | 0.124           | 0.284              |
| H21B1       | J    | Darlington               | 7.5 @ 10 mA                                      | 0.124           | 0.284              |
| H22B1       | K    | Darlington               | 7.5 @ 10 mA                                      | 0.124           | 0.284              |
| H21LT1      | L    | Optologic Inverter — O/C | 0.124                                            | 0.124           | 0.284              |
| H22LT1      | M    | Optologic Inverter — O/C | 0.124                                            | 0.124           | 0.284              |
| MOG70P1     | N    | Transistor               | 1.0 @ 20 mA                                      | 0.200           | 0.380              |
| QVE00118    | O    | Transistor               | 0.5 @ 20 mA                                      | 0.196           | 0.354              |
| QVE00039    | P    | Transistor               | 0.5 @ 20 mA                                      | 0.094           | Wires              |
| QVE0112     | Q    | Optologic Inverter — O/C | 0.118                                            | 0.118           | Wires              |

Slotted Optical Switches with Internal Dust Covers

| Mfr.'s Type | Fig. | Output Type | Min. Output I <sub>c</sub> @ I <sub>f</sub> (mA) | Optimum Response Dist. (In.) | Lead Spacing (In.) |
|-------------|------|-------------|--------------------------------------------------|------------------------------|--------------------|
| OPB860N55   | R    | Transistor  | 0.5 @ 20 mA                                      | 0.125                        | 0.32               |
| OPB862N55   | R    | Transistor  | 1.8 @ 20 mA                                      | 0.125                        | 0.32               |
| OPB865N55   | R    | Transistor  | 0.5 @ 20 mA                                      | 0.125                        | 0.22               |
| OPB867N55   | R    | Transistor  | 1.8 @ 20 mA                                      | 0.125                        | 0.22               |
| OPB860T55   | S    | Transistor  | 0.5 @ 20 mA                                      | 0.125                        | 0.32               |
| OPB862T55   | S    | Transistor  | 1.8 @ 20 mA                                      | 0.125                        | 0.32               |
| OPB865T55   | S    | Transistor  | 0.5 @ 20 mA                                      | 0.125                        | 0.22               |
| OPB867T55   | S    | Transistor  | 1.8 @ 20 mA                                      | 0.125                        | 0.22               |

Reflective Object Switches with Internal Dust Covers

| Mfr.'s Type | Fig. | Output Type | Min. Output I <sub>c</sub> @ I <sub>f</sub> (mA) | Optimum Response Dist. (In.) | Lead Spacing (In.) |
|-------------|------|-------------|--------------------------------------------------|------------------------------|--------------------|
| OPB703      | T    | Transistor  | 0.20 @ 40 mA                                     | 0.150                        | —                  |
| OPB703W     | U    | Transistor  | 0.20 @ 40 mA                                     | 0.150                        | Wires              |
| OPB706A     | V    | Transistor  | 0.50 @ 20 mA                                     | 0.050                        | 0.100/0.083        |

Infrared Photodetectors

| Mfr.'s Type | Fig. | Output Type              | I <sub>c</sub> Min. (mA) | BV <sub>ceo</sub> (Volts) | Reception Angle 1/2 Angle (°) |
|-------------|------|--------------------------|--------------------------|---------------------------|-------------------------------|
| L14C1       | W    | Transistor               | 1.00                     | 50                        | ±40                           |
| L14C2       | W    | Transistor               | 0.50                     | 50                        | ±40                           |
| L14F1       | X    | Darlington               | 3.00                     | 25                        | ±10                           |
| L14G1       | X    | Transistor               | 6.00                     | 45                        | ±10                           |
| L14G2       | X    | Transistor               | 3.00                     | 45                        | ±10                           |
| L14M1       | W    | Transistor               | 3.00                     | 30                        | ±40                           |
| L14N2       | W    | Transistor               | 6.00                     | 30                        | ±40                           |
| L14P1       | X    | Transistor               | 4.00                     | 30                        | ±10                           |
| L14P2       | X    | Transistor               | 8.00                     | 30                        | ±10                           |
| L14Q1       | C    | Transistor               | 1.00                     | 30                        | ±35                           |
| L14R1       | C    | Darlington               | 5.00                     | 30                        | ±35                           |
| QSB320      | Y    | Transistor               | 4.00                     | 30                        | ±60                           |
| QSC112      | E    | Transistor               | 1.00                     | 30                        | ±8                            |
| QSC113      | E    | Transistor               | 2.40                     | 30                        | ±8                            |
| QSC114      | E    | Transistor               | 4.00                     | 30                        | ±8                            |
| QSC133      | E    | Darlington               | 8.00                     | 30                        | ±8                            |
| QSD122      | F    | Transistor               | 1.00                     | 30                        | ±12                           |
| QSD123      | F    | Transistor               | 4.00                     | 30                        | ±12                           |
| QSD124      | F    | Transistor               | 6.00                     | 30                        | ±12                           |
| QSD722      | Z    | Transistor               | 0.60                     | 30                        | ±20                           |
| QSD724      | Z    | Transistor               | 3.50                     | 30                        | ±20                           |
| QSD733      | Z    | Transistor               | 5.00                     | 30                        | ±20                           |
| QSE113      | H    | Darlington               | 0.25                     | 30                        | ±25                           |
| QSE122      | H    | Transistor               | 3.00                     | 30                        | ±25                           |
| QSE133      | H    | Darlington               | 9.00                     | 30                        | ±25                           |
| QSE156      | AA   | Optologic Buffer — T/P   | —                        | V <sub>cc</sub> — 4.5-16  | ±10                           |
| QSE157      | AA   | Optologic Inverter — T/P | —                        | V <sub>cc</sub> — 4.5-16  | ±10                           |
| QSE158      | AA   | Optologic Buffer — O/C   | —                        | V <sub>cc</sub> — 4.5-16  | ±10                           |
| QSE159      | AA   | Optologic Inverter — O/C | —                        | V <sub>cc</sub> — 4.5-16  | ±10                           |
| QSE773      | BB   | PI-N Photodiode          | 0.03                     | 32                        | ±60                           |

Infrared Matched Emitter-Sensor Pairs

| Mfr.'s Type | Fig. | I <sub>c</sub> Min. (mA) | Tip-Tip Separation (In.) |
|-------------|------|--------------------------|--------------------------|
| H23A1       | C    | 1.5                      | 0.155                    |
| H23LTB      | E/B  | Optologic — Buffer T/P   | 0.155                    |
| H23LTI      | E/B  | Optologic — Inverter O/C | 0.155                    |
| H23LOB      | E/B  | Optologic — Buffer O/C   | 0.155                    |
| OPC1213     | E    | 5.0                      | 0.250                    |
| OPD1223     | F    | 10.0                     | 0.250                    |
| OPD5223     | G/U  | 7.5                      | 0.250                    |
| QPE1113     | H    | 0.3                      | 0.250                    |
| QPE1259     | H/V  | Optologic — Inverter O/C | 0.250                    |