

# Kingbright Infrared LEDs

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Dim. in mm

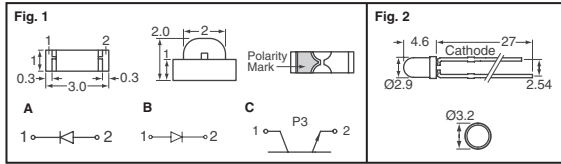


Fig.	LED Dia. (mm)	Peak Wave-Length	Lens Color	Oper. Curr. (mA)	Typ. Forward Voltage	Digi-Key Part No.	Cut Tape Pricing			Tape and Reel Qty.	Reel Pricing	Kingbright Part No.
							1	10	100			
1A	3.0 x 1.0	940nm	Clear	20	1.2	754-1065-1-ND	.33	2.44	17.88	2,000	98.00/M	APA3010F3C
1B	3.0 x 1.0	880nm	Clear	20	1.3	754-1070-1-ND	.59	4.39	32.18	2,000	176.00/M	APA3010SF4C
1C	3.0 x 1.0	940nm	Blue	—	—	754-1067-1-ND	.39	2.93	21.45	2,000	117.00/M	APA3010P3BT
2	3mm	940nm	Clear	20	1.2	754-1241-ND†	.20	1.51	12.22	—	—	WP7104F3C

‡ For Tape and Reel part number, change 1-ND to 2-ND. † Bulk

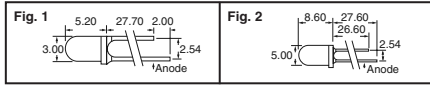


Fig.	LED Dia. (mm)	Peak Wave-Length	Lens Color	Oper. Curr. (mA)	Typ. Forward Voltage	Digi-Key Part No.	Price Each			Lumex Part No.
							1	10	100	
1	3	940 nm	Clear	60	1.2	67-1000-ND	.25	.23	.20	OED-EL-8L
2	5	940 nm	Clear	100	1.5	67-1001-ND	.27	.25	.22	OED-EL-1L2

# Panasonic Photo Interrupter

Photo Interrupters are a transmissive photosensor series in which a high efficiency GaAs infrared light emitting diode is used as the light emitting element, and a high sensitivity photo transistor is used as the light detecting element. The two elements face each other, so an object passing between them is detected.

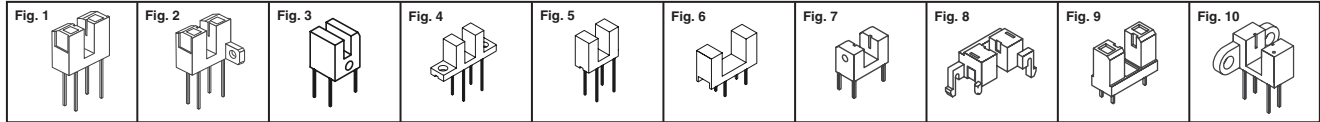
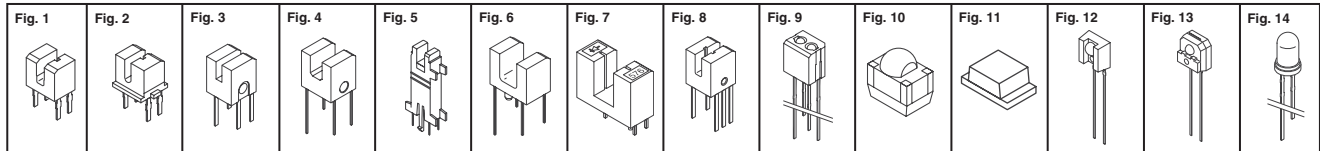


Fig.	Sensing Method	Sensing Distance	Terminal Type	Typ. 'on/off (µsec.)	Digi-Key Part No.	Price Each			Panasonic Part No.
						1	10	100	
1	Slot	3.0mm	PC Board	5/5	CNZ1021-ND◆	1.39	1.16	.93	CNZ1021
2	Slot	3.0mm	PC Board	5/5	CNZ1023-ND◆	1.33	1.07	.80	CNZ1023
3	Slot	0.9mm	PC Board	35/35	CNZ1002-ND	.87	.73	.59	CNZ1002
		1.2mm	PC Board	35/35	CNA1303K-ND	.87	.73	.59	CNA1303K
		2.0mm	PC Board	35/35	CNA1302K-ND◆	.87	.73	.59	CNA1302K
4	Slot	5.0 mm	PC Board	6/6	CNZ1111-ND◆	2.65	2.12	1.65	CNZ1111
5	Slot	5.0mm	PC Board	6/6	CNZ1112-ND◆	2.02	1.62	1.22	CNZ1112
		5.0mm	PC Board	6/6	CNA1012K-ND◆	1.38	1.16	.93	CNA1012K
6	Slot	10.0mm	PC Board	6/6	CNZ1120-ND◆	1.86	1.49	1.12	CNZ1120
7	Slot	1.0mm	PC Board	50/50	CNA1311K-ND◆	.87	.66	.50	CNA1311K
		1.0mm	PC Board	50/50	CNA1311KOTLC-ND◆	1.04	.87	.70	CNA1311KOTLC
		2.0mm	PC Board	50/50	CNA1312KOTLC-ND◆	.98	.82	.66	CNA1312KOTLC
8	Slot	3.0mm	PC Board	5/5	CNA1006N-ND◆	.77	.58	.44	CNA1006N
9	Slot	5.0mm	PC Board	5/5	CNA1007H-ND◆	.74	.56	.42	CNA1007H
10	Slot	5.0mm	PC Board	6/6	CNA1011K-ND◆	1.51	1.21	.91	CNA1011K

◆ RoHS Compliant

# ROHM SEMICONDUCTOR

# Optical Sensors



## Optical Interrupters

Fig.	Output Type	Slot Width (mm)	Response Time (tr/τ) (µs)	Max. Output Current (mA)	Digi-Key Part No.	Pricing			Rohm Part No.
						1	10	100	
1	NPN	1.0	10/10	30	511-1336-ND	1.41	8.71	63.72	RPI-121
		1.0	10/10	30	511-1338-ND	1.24	7.25	49.58	RPI-124F
		2.0	10/10	30	511-1347-ND	1.18	6.90	47.22	RPI-221
		2.0	10/10	30	511-1348-ND	1.18	6.90	47.22	RPI-222
		4.0	10/10	30	511-1341-ND	1.18	6.90	47.22	RPI-411C1
2	NPN	0.8	10/10	30	511-1337-ND	1.41	8.71	63.72	RPI-122F
3	NPN	1.2	10/10	30	511-1339-ND	1.41	8.71	63.72	RPI-131
4	NPN	2.0	10/10	30	511-1349-ND	1.13	6.97	50.98	RPI-243
		2.0	10/10	30	511-1350-ND	1.24	7.25	49.58	RPI-246
5	NPN	3.0	10/10	30	511-1340-ND	.97	5.69	38.96	RPI-303
6	NPN	3.0	10/10	30	511-1351-ND	1.24	7.25	49.58	RPI-352
7	NPN	5.0	10/10	30	511-1475-ND	1.14	7.18	53.82	RPI-579N1
8	Photo IC	1.1	5/05	10	511-1342-ND	2.00	12.99	99.42	RPI-1133

## Photoreflectors

Fig.	Style/Pkg.	Maximum Output Current (mA)	V <sub>I</sub> (V)	Emitting Wave-length	Digi-Key Part No.	Pricing			Rohm Part No.
						1	10	100	
9	Top	30	1.34	800	511-1366-ND	2.32	15.07	115.32	RPR-220

## Phototransistors



Fig.	Output Type	Style/Pkg.	Max. Output Current (mA)	Peak Sensitivity Wavelength (nm)	Digi-Key Part No.	Pricing			Rohm Part No.
						1	10	100	
10	NPN	SMT	20	800	511-1355-1-ND†	1.06	6.21	42.50	RPM-012P8T87F
		SMT	20	800	511-1355-2-ND‡	317.00/1,000			RPM-012P8T87F
		SMT	10	600	511-1356-1-ND†	1.06	6.21	42.50	RPM-075PT886
11	NPN	SMT	10	600	511-1356-2-ND‡	909.00/3,000			RPM-075PT886
12	NPN	Side View	30	800	511-1353-ND	.65	3.80	25.97	RPM-20PBF
13	NPN	Side View	30	800	511-1354-ND	.71	4.14	28.33	RPM-22PBF
		Top	30	800	511-1357-ND	.65	3.80	25.97	RPT-34PBF3F
		T1	30	800	511-1358-ND	.83	4.83	33.05	RPT-37PBF3F
14	NPN	T1	30	800	511-1359-ND	.83	4.83	33.05	RPT-38PBF3F

† Cut Tape ‡ Tape and Reel

## Infrared Emitters

Fig.	Style/Pkg.	I <sub>F</sub> Max. (mA)	V <sub>F</sub> (V)	Emitting Wave-length (nm)	Digi-Key Part No.	Pricing			Rohm Part No.
						1	10	100	
12	Side View	50	1.3	950	511-1361-ND	.89	5.18	35.41	SIM-20ST
13	Side View	50	1.3	950	511-1362-ND	.89	5.18	35.41	SIM-22STF
		T1	100	1.3	950	511-1363-ND	.57	3.20	20.78
14	T1 3/4	100	1.3	950	511-1364-ND	.57	3.20	20.78	SIR-56S3FF
		75	1.2	940	511-1343-ND	1.06	6.21	42.50	SIR-320S3FF
		75	1.3	940	511-1344-ND	.89	5.18	35.41	SIR-341S3FF
		100	1.38	950	511-1345-ND	.77	4.49	30.69	SIR-50S5TA47F
		100	1.34	940	511-1365-ND	.50	2.80	18.18	SIR-56S3S3FM
		100	1.6	850	511-1346-ND	1.96	12.73	97.43	SIR-56S3S3F

Digi-Reel® Most SMT cutdown parts are available on a Digi-Reel®. For Digi-Reel part number, change 1-ND to 6-ND or CT-ND to DKR-ND. See Digi-Key® Services on page 2 for additional information.

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