

Panasonic® Reflective Photosensors

Reflective Photosensors consist of a high efficiency GaAs infrared light emitting diode which is integrated with a high sensitivity phototransistor in a single resin package.

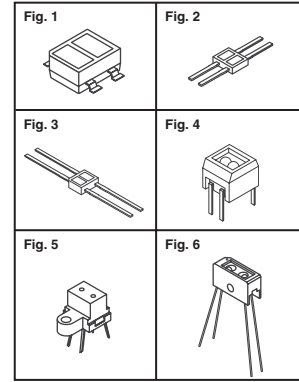
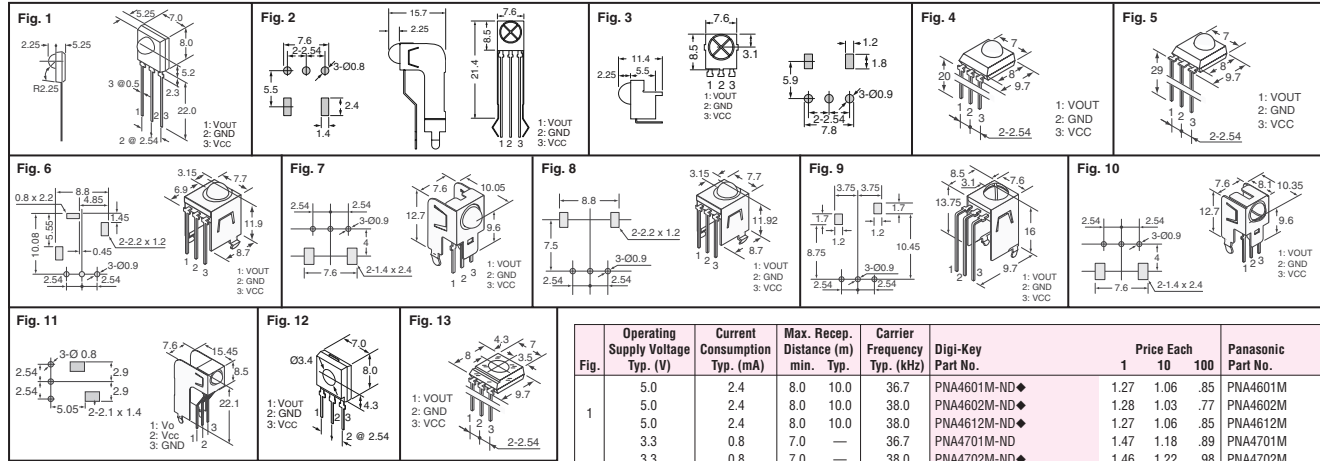


Fig.	Rank	IC (µA)	Typ. Ion/Off (µsec.)	Input VR (V)	Input IF (mA)	Output IC (mA)	VCE0 (V)	Digi-Key Part No.	Cut Tape Price Each			Digi-Key Part No.	Tape & Reel		Panasonic Part No.	
									1	10	500		Qty.	Pricing		
1	L	23-90	30/40	6	50	20	35	CNB1001OLLCT-ND	.97	.74	.55	.35	CNB1001OLLTR-ND	1,000	324.00	CNB1001OLL
	R	41-90	30/40	6	50	20	35	CNB1001ORLCT-ND	.99	.83	.66	.46	CNB1001ORLTR-ND	1,000	437.00	CNB1001ORL
	W	23-160	30/40	6	50	20	35	CNB1001OWLCT-ND	.92	.70	.52	.33	CNB1001OWLTR-ND	1,000	307.00	CNB1001OWL
	H	41-160	30/40	6	50	20	35	CNB1001OHLCT-ND	.97	.74	.55	.35	CNB1001OHLTR-ND	1,000	324.00	CNB1001OHL
	S	74-160	30/40	6	50	20	35	CNB1001OSLCT-ND	.77	.65	.52	.36	CNB1001OSLTR-ND	1,000	341.00	CNB1001OSL
	R	41-90	30/40	6	50	20	35	CNB1002ORLCT-ND	.77	.65	.52	.36	CNB1002ORLTR-ND	1,000	341.00	CNB1002ORL
2	R	180-440	20/20	3	50	20	30	CNB10112CT-ND	.77	.65	.52	.36	CNB10112TR-ND	3,000	333.00/M	CNB10112
	—	180-440	20/20	3	50	20	30	CNB13020R-ND	.95	.72	.54	.34	—	—	CNB13020R	
	—	460-12,000	150/150	3	50	30	20	CNB2301-ND	.77	.65	.52	.36	—	—	CNB2301	
	R	1,300-4,950	150/150	3	50	30	20	CNB2301OR-ND	.81	.68	.54	.38	—	—	CNB2301OR	
	R	1,300-4,950	150/150	3	50	30	20	CNB2301OROLF-ND	.85	.71	.57	.40	—	—	CNB2301OROLF	
	S	360-880	20/20	3	50	20	30	CNB13020S-ND	.77	.58	.44	.27	—	—	CNB13020S	
3	R	180-440	20/20	3	50	20	30	CNB13020ROLF-ND	.82	.62	.47	.29	—	—	CNB13020ROLF	
	S	360-880	20/20	3	50	20	30	CNB13020SOLF-ND	.82	.62	.47	.29	—	—	CNB13020SOLF	
	R	180-440	20/20	3	50	20	30	CNB1301-ND	1.28	1.03	.77	.70	—	—	CNB1301	
	S	360-880	20/20	3	50	20	30	CNB1304H-ND	2.28	1.83	1.37	1.23	—	—	CNB1304H	
	4	—	800-5,200	20/20	3	50	20	30	CNB1304H-ND	2.28	1.83	1.37	1.23	—	—	CNB1304H
	6	—	100-1,500	6/6	3	50	20	30	CNB1304H-ND	2.28	1.83	1.37	1.23	—	—	CNB1304H
5	—	100-1,200	6/6	3	50	20	30	CNZ2153-ND	2.88	2.31	1.80	1.67	—	—	CNZ2153	

◆ RoHS Compliant

Bipolar Integrated Circuit with Photodetection Function

RoHS Compliant Parts Available (parts other than indicated may be available as RoHS compliant)



FEATURES:

- PNA46xxM Series:** • Designed for infrared remote control • Extension distance is 8M or more • External parts are not required • Lens resin filters visible light for better performance • Available with shielding brackets for increased range • 5V operation voltage
- PNA47xxM Series:** • Designed for infrared remote control • Extension distance is 7M or more • External parts are not required • Lens resin filters visible light for better performance • Available with shielding brackets for increased range • 3.3V operation voltage
- PNA4603H Series:** (For brightness control systems) • Wavelength characteristics close to human visual sensitivity • External parts not required • Good output voltage linearity with respect to incident illuminance

PNA4603H Series Main Characteristics

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Operating Supply Voltage	V _{CC}	—	4.5	5.0	5.5	V
Current Consumption	I _{CC}	V _{CC} = 5.25V	0.5	1.0	1.5	mA
Output Voltage	V _{OFF}	L = 0 lx, V _{CC} = 5.0V	0.1	0.5	0.8	V
	V _{D1}	L = 10 lx, V _{CC} = 5.0V †	2.0	2.7	3.4	V
	V _{D2}	L = 800 lx, V _{CC} = 5.0V †	3.9	4.1	4.9	V
	η	V _{D1} -V _{OFF} , V _{CC} = 5.0V	1.65	1.9	3.3	V
Output Impedance	Z	—	5.0	10	15.0	kΩ
Peak Sensitivity Wavelength	λ _p	—	400	600	700	nm

† Halogen lamp light source.

Fig.	Operating Supply Voltage Typ. (V)	Current Consumption Typ. (mA)	Max. Recep. Distance (m) min. Typ.	Carrier Frequency Typ. (kHz)	Digi-Key Part No.	Price Each 1 10 100	Panasonic Part No.
1	5.0	2.4	8.0	10.0	36.7	1.27 1.06 .85	PNA4601M
	5.0	2.4	8.0	10.0	38.0	1.28 1.03 .77	PNA4602M
	5.0	2.4	8.0	10.0	38.0	1.27 1.06 .85	PNA4612M
	3.3	0.8	7.0	—	36.7	1.47 1.18 .89	PNA4701M
	3.3	0.8	7.0	—	38.0	1.46 1.22 .98	PNA4702M
2	5.0	2.4	11.0	18.0	36.7	1.43 1.15 .86	PNA4611M00YB-ND
	5.0	2.4	11.0	18.0	38.0	1.43 1.15 .86	PNA4612M00YB-ND
	5.0	2.4	11.0	18.0	56.9	1.43 1.15 .86	PNA4614M00YB-ND
3	5.0	2.4	11.0	18.0	36.7	1.43 1.15 .86	PNA4611M00XD-ND
	5.0	2.4	11.0	18.0	38.0	1.43 1.15 .86	PNA4612M00XD-ND
4	5.0	2.4	8.0	10.0	36.7	1.46 1.22 .98	PNA4601M00LB-ND
	5.0	2.4	8.0	10.0	38.0	1.46 1.22 .98	PNA4602M00LB-ND
	3.3	0.8	7.0	—	36.7	1.46 1.22 .98	PNA4701M00LB-ND
5	5.0	2.4	8.0	10.0	36.7	1.46 1.22 .98	PNA4601M00LC-ND
	5.0	2.4	11.0	18.0	38.0	1.46 1.22 .98	PNA4612M00HB-ND
6	5.0	2.4	11.0	18.0	38.0	1.46 1.22 .98	PNA4612M00HB-ND
	3.3	0.8	9.0	—	36.7	1.46 1.22 .98	PNA4701M00HB-ND
7	5.0	2.4	11.0	18.0	36.7	1.46 1.22 .98	PNA4611M00HC-ND
	5.0	2.4	11.0	18.0	36.7	1.46 1.22 .98	PNA4611M00HD-ND
9	5.0	2.4	11.0	18.0	36.7	1.46 1.22 .98	PNA4611M00XB-ND
	5.0	2.4	11.0	18.0	38.0	1.46 1.22 .98	PNA4612M00XB-ND
	5.0	2.4	11.0	18.0	36.7	1.46 1.22 .98	PNA4611M00YA-ND
10	5.0	2.4	11.0	18.0	36.7	1.46 1.22 .98	PNA4611M00YA-ND
	5.0	2.4	11.0	18.0	38.0	1.46 1.22 .98	PNA4612M00YA-ND
11	5.0	1.9	11.0	25.0	56.9	1.38 1.11 .83	PNA4658M00YE-ND
	5.0	2.4	11.0	18.0	38.0	3.16 2.54 1.97	PNA4603H
12	See PNA4603H Main Characteristics Chart	—	—	—	—	2.24 1.80 1.35	PNA4603H00LB-ND
13	See PNA4603H Main Characteristics Chart; with holder	—	—	—	—	—	PNA4603H00LB

◆ RoHS Compliant

Optoisolators

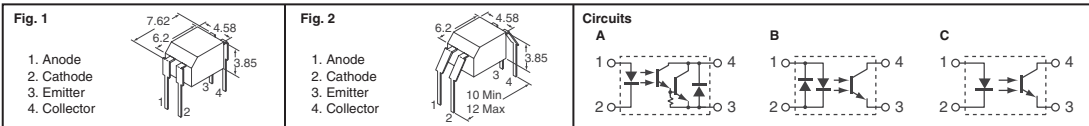


Fig.	Circuit	Isolation Voltage (Vrms)	Current Transfer Ratio	V _{CEO} (Max.)	Typ. Ion/Off (µsec.)	Digi-Key Part No.	Price Each 1 10 100
1	C	5000	80-600%	80	2/3	CNC1S101-ND	.58 .47 .35
			100-300%	80	2/3	CNC1S101R-ND	.51 .39 .29
			200-600%	80	2/3	CNC1S101S-ND	.51 .39 .29
			100-250%	80	2/3	CNC1S171ROLF-ND	.56 .43 .32
			200-600%	80	2/3	CNC1S171SOLF-ND	.56 .43 .32
			20-300%	80	4/3	CNC7S101-ND	.72 .54 .41
	B	5000	50-150%	80	4/3	CNC7S101R-ND	.77 .58 .44
			100-300%	80	4/3	CNC7S101S-ND	.77 .58 .44
			80-240%	80	4/3	CNC7S101Y-ND	.77 .58 .44

Fig.	Circuit	Isolation Voltage (Vrms)	Current Transfer Ratio	V _{CEO} (Max.)	Typ. Ion/Off (µsec.)	Digi-Key Part No.	Price Each 1 10 100
1	A	5000	1000-4000%	350	40/15	CNC2S501-ND	.85 .71 .57
			1000-4000%	350	40/15	CNC23731-ND	.77 .65 .52
2	C	5000	100-300%	80	2/3	CNC1S101ROLF-ND	.56 .43 .32
			200-600%	80	2/3	CNC1S101SOLF-ND	.56 .43 .32
			50-600%	80	2/3	CNC1S171-ND	.71 .54 .40
			100-250%	80	2/3	CNC1S171R-ND	.51 .39 .29
200-600%	80	2/3	CNC1S171S-ND	.51 .39 .29			

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More Product Available Online: www.digikey.com

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