

VISHAY Opto Components

RoHS Compliant This product is RoHS compliant.

FULLY INTEGRATED PROXIMITY AND AMBIENT LIGHT SENSOR WITH INFRARED EMITTER AND I²C INTERFACE

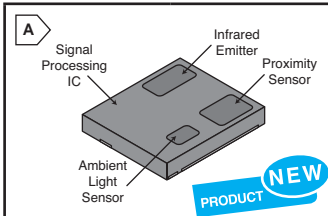
Features:

- Built in infrared LED and photo pin diode for proximity function.
- Built in ambient light photo pin diode with close to human eye sensitivity characteristics.

Applications:

- Proximity sensor for mobile devices (e.g. smart phones, touch phones, PDA, GPS) for touch screen locking, power saving, etc.
- Integrated ambient light function for display/keyboard contrast control and dimming of mobile devices
- Proximity/optical switch for consumer, computing and industrial devices and displays
- Dimming control for consumer, computing and industrial displays

Surface Mount Devices



MOUSER STOCK NO.		Fig.	Bus	Resolution	Supply Voltage (V)	IQ (µA)	LED Pulse Current (mA)	Proximity Detection Max.	Ambient Light Detection	Ambient Light Resolution	Price Each				Reel Price Each
Mfr.	Mfr. Part No.										1	100	500	1800	
◆	78-VCNL4000-GS08	A	I ² C	16 Bit	2.5 to 3.6	1.5	10-200	200mm	0.33lx-22klx	0.33lx	2.97	2.20	1.92	1.54	
Description															
◆	78-VCNL4000DEMOKIT	B	VCNL4000 Dev. Kit - Includes Sensor Board, USB Connector Board, and Software								37.00	-	-	-	

DETECTORS

Surface Mount Devices

For quantities greater than listed, call for quote.

MOUSER STOCK NO.		Fig.	Angle of Half Sensitivity (°)	Reverse Light Current			Peak Wavelength Sensitivity (nm)	Reverse Dark Current (typ)(nA)	Rise/Fall Times (ns)	Price Each				
Mfr.	Mfr. Part No.			(Min./Typ.) (µA)	@ Rev. Volt (V)	@ Ee (mW/cm ²)				@ Wave-length (nm)	1	100	500	1000
Photo PIN Diodes														
◆	782-VEMD2000X01	C	±15	5/12	5	1	950	940	1	100/100	.50	.40	.33	.29
◆	782-VEMD2020X01	D	±15	5/12	5	1	950	940	1	100/100	.50	.40	.33	.29
◆	782-VEMD2500X01	C	±15	5/12	5	1	950	900	1	100/100	.75	.47	.34	.30
◆	782-VEMD2520X01	D	±15	5/12	5	1	950	900	1	100/100	.75	.47	.34	.30
◆	782-TEMD7000X01	E	±60	----/3	5	1	950	900	1	100/100	.74	.59	.49	.43
◆	782-TEMD7100X01	E	±60	----/3	5	1	950	950	1	100/100	.74	.59	.49	.43
◆	782-TEMD5020	F	±65	25/35	5	1	950	900	2	100/100	1.37	1.15	1.04	.967
◆	782-TEMD5120X01	F	±65	25/35	5	1	950	940	2	100/100	1.37	1.15	1.04	.967
◆	782-VBP104FAS	G	±65	25/35	5	1	950	950	2	100/100	.66	.53	.44	.38
◆	782-VBP104FASR	G	±65	25/35	5	1	950	950	2	100/100	.66	.53	.44	.38
◆	782-VBP104S	H	±65	25/35	5	1	950	940	2	100/100	.71	.57	.47	.41
◆	782-VBP104SR	I	±65	25/35	5	1	950	940	2	100/100	.66	.623	.60	.53
◆	782-TEMD5010	F	±65	40/55	5	1	950	900	2	100/100	1.44	1.21	1.10	1.01
◆	782-TEMD5110X01	F	±65	45/55	5	1	950	940	2	100/100	1.44	1.21	1.10	1.01
◆	782-VBPW34FAS	G	±65	45/55	5	1	950	950	2	100/100	.71	.666	.64	.57
◆	782-VBPW34S	H	±65	45/55	5	1	950	940	2	100/100	.71	.57	.47	.41
◆	782-VBPW34SR	I	±65	45/55	5	1	950	940	2	100/100	.71	.57	.47	.41
◆	782-TEMD5080X01	J	±65	----/60	5	1	950	940	2	40/40	1.31	1.13	1.05	.87
◆	782-BPW22NF	J	±60	55/85	5	1	870	940	2	100/100	.90	.60	.512	.415
◆	782-BPW34	K	±65	40/50	5	1	950	900	2	100/100	.98	.66	.558	.453
Photo Transistors														
◆	782-VEMT2000X01	C	±15	1/100	5	50	860	20	6	----/----	.47	.37	.31	.27
◆	782-VEMT2020X01	D	±15	1/100	5	50	860	20	6	----/----	.47	.37	.31	.27
◆	782-VEMT2500X01	C	±15	1/100	5	50	850	20	6	----/----	.71	.44	.32	.28
◆	782-VEMT2520X01	D	±15	1/100	5	50	850	20	6	----/----	.71	.44	.32	.28
◆	782-VEMT3700	L	±60	1/200	20	50	850	70	0.5	6/2	.75	.65	.60	.54
◆	782-VEMT3700F	L	±60	1/200	20	50	850	70	0.5	6/2	.58	.50	.46	.38
◆	782-VEMT4700	L	±60	1/200	20	50	850	70	0.5	6/2	.61	.53	.49	.40
◆	782-BPV11F	M	±15	1/50	10	50	930	70	9	6/5	.84	.55	.482	.373
◆	782-BPW85	N	±25	1/200	20	50	850	70	1.5	2.0/2.3	.35	.28	.23	.20
◆	782-BPW85C	N	±25	1/200	20	50	850	70	5	2.0/2.3	.38	.31	.25	.22
◆	782-TEKT5400S	O	±37	1/100	20	100	920	70	4	6/5	.81	.53	.431	.361

EMITTERS

Surface Mount Devices

For quantities greater than listed, call for quote.

MOUSER STOCK NO.		Fig.	Angle of Half Intensity (°)	Radiant Intensity @ IF		Forward Voltage @ IF		Peak Emission Wavelength (nm)	Rise/Fall Times (ns)	Price Each			
Mfr.	Mfr. Part No.			(min/typ) (mW/sr)	(mA)	(typ/max) (V)	(mA)			1	100	500	1000
Standard													
◆	782-CQY37N	P	±12	2.5/5.0	50	1.3/1.6	50	950	400/450	.53	.33	.273	.208
◆	782-TSHA4401	N	±20	16/30	100	1.5/1.8	100	875	600/600	.29	.23	.19	.17
◆	782-TSKS5400S	O	±30	2.0/----	50	1.3/1.7	100	950	400/450	.75	.49	.43	.333
High-Power													
◆	782-TSML1000	C	±12	3/7	20	1.2/1.5	20	940	800/800	.67	.54	.482	.386
◆	782-TSMF1020	D	±17	2.5/5	20	1.3/1.5	20	890	30/30	.78	.63	.562	.348
◆	782-VSML3710	L	±60	4/8	100	1.35/1.6	100	940	800/800	.51	.41	.36	.337
◆	782-TSAL6100	M	±10	40/60	100	1.35/1.6	100	940	800/800	.44	.22	.189	.151
◆	782-TSAL6200	M	±17	40/60	100	1.35/1.6	100	940	800/800	.44	.22	.189	.151
◆	782-TSAL7200	M	±17	40/60	100	1.35/1.6	100	940	800/800	.21	.17	.14	.12
◆	782-TSAL6400	M	±25	25/40	100	1.35/1.6	100	940	800/800	.44	.22	.189	.151
◆	782-TSAL7400	M	±25	25/40	100	1.35/1.6	100	940	800/800	.21	.17	.14	.12
◆	782-VSMY7852X01-GS08	Q	60	30/42	250	1.8/2	250	850	8/10	1.97	1.86	1.48	1.30
◆	782-VSMY7850X01-GS08	Q	60	130/170	1000	2.2/5	1000	850	15/18	4.98	3.96	3.15	2.70
High Speed													
◆	782-VSMY1850	E	±60	5/15	100	1.65/1.9	100	850	10/10	.68	.64	.57	.51
◆	782-VSMY2850G	D	±10	10/100	100	1.65/1.9	100	850	10/10	.52	.49	.48	.43
◆	782-VSMY2850RG	D	±10	50/100	100	1.65/1.9	100	850	10/10	.52	.49	.48	.43
◆	782-VSMY3850-GS08	L	±60	12/17	100	1.6/1.9	100	850	10/10	.53	.51	.50	.44
◆	782-VSLY3850	N	±18	35/70	100	1.65/1.9	100	850	10/10	.90	.84	.60	.53
◆	782-VSLY5850	N	±3	300/600	100	1.65/1.9	100	850	10/10	.93	.75	.62	.54
◆	782-VSMB2000X01	D	±12	20/40	100	1.35/1.6	100	940	15/15	.44	.35	.29	.25
◆	782-VSMB2020X01	C	±12	20/40	100	1.35/1.6	100	940	15/15	.44	.35	.29	.25
◆	782-VSMB1940X01	E	±60	3/6	100	1.35/1.6	100	940	15/15	.53	.42	.35	.30
◆	782-VSMF3710	L	±60	6/10	100	1.4/1.6	100	890	30/30	.56	.48	.44	.40
◆	782-VSMB3940X01	L	±60	7/13	100	1.35/1.6	100	940	15/15	.41	.356	.33	.27
◆	782-VSMG2720	L	±60	8/14	100	1.45/1.6	100	830	15/15	.91	.79	.73	.60
◆	782-VSMF4720	L	±60	10/16	100	1.45/1.6	100	870	15/15	.55	.476	.44	.36
◆	782-TSHG5210	M	±10	140/230	100	1.5/1.8	100	850	20/13	.72	.58	.48	.42
◆	782-TSHG6210	M	±10	140/230	100	1.5/1.8	100	850	20/13	.72	.58	.48	.42
◆	782-TSHG5410	M	±18	45/90	100	1.5/1.8	100	850	20/13	.72	.58	.48	.42
◆	782-TSHG6410	M	±18	45/90	100	1.5/1.8	100	850	20/13	.72	.58	.48	.42
◆	782-TSFF5510	M	±22	16/32	100	1.45/1.7	100	870	15/15	.89	.71	.59	.51
◆	782-VSLB3940	N	±22	32/65	100	1.35/1.6	100	940	15/15	.36	.29	.24	.21
◆	782-TSHF6410	M	±22	45/70	100	1.4/1.6	100	890	30/30	.34	.27	.22	.20
◆	782-TSFF5410	M	±22	45/70	100	1.5/1.8	100	870	15/15	.86	.60	.479	.42
◆	782-TSHG6400	M	±22	45/70	100	1.5/1.8	100	850	20/13	1.06	.74	.587	.513
◆	782-TSHG5510	M	±38	18/32	100	1.45/1.7	100	830	15/15	.99	.79	.65	.57

