



## Distance Measuring Sensor Lineup

Output	Range of distance measuring	Features	Model No.	
1-bit digital output according to distance measuring	3 to 30 cm	1-bit digital output (detected distance: 15/17.5/13 cm)	GP2D150AJ00F/GP2D150MJ00F/GP2Y0D413K0F	
	10 to 80 cm	1-bit digital output (detected distance: 24 cm)	GP2D15J0000F	
		General purpose	GP2Y0D21YK0F	
	20 to 150 cm	1-bit digital output (detected distance: 80 cm)	GP2Y0D02YK0F	
			Battery drive compatible, compact, operating supply voltage (2.7 V to 6.2 V), 1-bit digital output (detected distance: 5/10 cm)	GP2Y0D805Z0F/GP2Y0D810Z0F
		Compact, thin 1-bit digital output (detected distance: 10/40 cm)	GP2Y0D310K/GP2Y0D340K	
Output according to distance measuring	4 to 30 cm	Analog voltage output	GP2D120XJ00F/GP2Y0A41SK0F	
	10 to 80 cm	8-bit serial (External control signal required)	GP2D02J0000F	
		Analog voltage output	GP2D12J0000F	
			General purpose	GP2Y0A21YK0F
	20 to 150 cm	Analog voltage output	GP2Y0A02YK0F	
	100 to 500 cm	Analog voltage output	GP2Y0A700K0F	

## Wide Angle Sensor Lineup

Output	Range of distance measuring	Detection angle of view	Model No.
Voltage output according to distance measuring	4 to 30 cm	25° (When using 5 beams)	GP2Y3A001K0F
	20 to 150 cm	25° (When using 5 beams)	GP2Y3A002K0F
	40 to 300 cm	25° (When using 5 beams)	GP2Y3A003K0F

## High-Precision Displacement Sensor

Output	Range of distance measuring	Features	Model No.
Voltage output according to distance measuring	4.5 to 6.0 mm	Resolution: 50 μm	GP2Y0AH01K0F

## Paper Size Sensor (Using Optical Distance Measuring Method) Lineup

Output	Features	Model No.	
8-bit serial output	1-beam	GP2D06J0000F/GP2D061J000F/GP2D062J000F	
		Thin type (T: 11 mm)	GP2Y2E101K0F
	2-beam	GP2D03J0000F/GP2D032J0000F	
	3-beam	GP2D07J0000F/GP2D071J000F/GP2D072J000F	
		Thin type (T: 11 mm)	GP2Y2E301K0F
1-bit output	1-beam (detection height: 60 mm)	Thin type (T: 11.5 mm)	GP2Y2D160K0F
Analog output relative to measuring distance	1-beam (detection height: 80 mm)	Thin type (T: 11.5 mm)	GP2Y2A180K0F
	2-beam (detection height: 80 mm)	Thin type (T: 11.5 mm)	GP2Y2A280K0F

## Dust Sensor Unit Lineup

Output	Features	Model No.
Analog output	With peak-hold circuit	GP2U06J0000F
	Pulse analog output, single-shot detection of house dust, General purpose	GP2Y1010AU0F

## Color Toner Concentration (Deposition Amount) Sensor Lineup

Output	Features	Model No.
Analog output	Employs diffuse reflection system	GP2TC1J0000F
	Employs diffuse reflection system + mirror reflection system	GP2TC2J0000F

## Distance Measuring Sensors

(Ta = 25°C)

Model No.	Features	Absolute maximum ratings		Electro-optical characteristics*1				
		Vcc (V)	Topr (°C)	Distance measuring range (cm)	VOH (V) MIN.	VOL (V) MAX.	Dissipation current	
							Operating (mA)	Standby (µA)
GP2D02J0000F ▲	Distance measuring sensor united with PSD*, infrared LED and signal processing circuit, 8-bit serial output	-0.3 to +10	-10 to +60	10 to 80	Vcc - 0.3	0.3	MAX. 35	MAX. 8
GP2D12J0000F	Distance measuring sensor united with PSD*, infrared LED and signal processing circuit, Linear voltage output	-0.3 to +7	-10 to +60	10 to 80	Vo (TYP.) = 0.4 V (at L = 80 cm), ΔVo (TYP.) = 2.0 V (at L: 80 cm → 10 cm)		MAX. 50	-
GP2Y0A21YK0F	Distance measuring sensor united with PSD*, infrared LED and signal processing circuit, Linear voltage output	-0.3 to +7	-10 to +60	10 to 80	Vo (TYP.) = 0.4 V (at L = 80 cm), ΔVo (TYP.) = 1.9 V (at L: 80 cm → 10 cm)		MAX. 40	-
GP2D120XJ00F	Distance measuring sensor united with PSD*, infrared LED and signal processing circuit, Linear voltage output	-0.3 to +7	-10 to +60	4 to 30	Vo (TYP.) = 0.4 V (at L = 30 cm), ΔVo (TYP.) = 2.25 V (at L = 30 cm → 4 cm)		MAX. 50	-
☆GP2Y0D805Z0F	Light detector, infrared LED and signal processing circuit, short distance measuring sensor unit, battery drive compatible (operating power supply: 2.7 to 6.2 V)	-0.3 to +7	-10 to +60	-	Vcc - 0.6	0.6	MAX. 6.5	MAX. 8
☆GP2Y0D810Z0F	Light detector, infrared LED and signal processing circuit, short distance measuring sensor unit, battery drive compatible (operating power supply: 2.7 to 6.2 V)	-0.3 to +7	-10 to +60	-	Vcc - 0.6	0.6	MAX. 6.5	MAX. 8
GP2Y0D310K	Digital voltage output according to the measured distance (at 10 cm) of GP2Y0D340K	-0.3 to +7	-10 to +60	-	Vcc - 0.3	0.6	MAX. 35	-
GP2Y0D340K	Compact, thin type (15 x 9.6 x 8.7 mm: sensor part), Light detector, infrared LED and signal processing circuit, Digital voltage output according to the measured distance (at 40 cm)	-0.3 to +7	-10 to +60	-	Vcc - 0.3	0.6	MAX. 35	-
GP2D15J0000F	Distance measuring sensor united with PSD*, infrared LED and signal processing circuit, Digital voltage output	-0.3 to +7	-10 to +60	10 to 80	Vcc - 0.3	0.6	MAX. 50	-
GP2Y0D21YK0F	Distance measuring sensor united with PSD*, infrared LED and signal processing circuit, Digital voltage output	-0.3 to +7	-10 to +60	10 to 80	Vcc - 0.3	0.6	MAX. 40	-
☆GP2Y0A41SK0F	Distance measuring sensor united with PSD*, infrared LED and signal processing circuit, Short measuring cycle (16.5 ms)	-0.3 to +7	-10 to +60	4 to 30	Vo (TYP.) = 0.4 V (at L = 30 cm), ΔVo (TYP.) = 2.25 V (at L = 30 cm → 4 cm)		MAX. 22	-
GP2D150AJ00F	Distance measuring sensor united with PSD*, infrared LED and signal processing circuit, Digital voltage output	-0.3 to +7	-10 to +60	3 to 30	Vcc - 0.3	0.6	MAX. 50	-
GP2D150MJ00F	Distance measuring sensor united with PSD*, infrared LED and signal processing circuit, Digital voltage output	-0.3 to +7	-10 to +60	3 to 30	Vcc - 0.3	0.6	MAX. 50	-
GP2Y0D413K0F	Distance measuring sensor united with PSD*, infrared LED and signal processing circuit, Digital voltage output	-0.3 to +7	-10 to +60	3 to 30	Vcc - 0.3	0.6	-	-
GP2Y0D02YK0F	Distance measuring sensor united with PSD*, infrared LED and signal processing circuit, long distance measuring sensor unit (No external control signal required), Digital voltage output according to the measured distance (at 80 cm)	-0.3 to +7	-10 to +60	20 to 150	Vcc - 0.3	0.6	MAX. 50	-
GP2Y0A02YK0F	Distance measuring sensor united with PSD*, infrared LED and signal processing circuit	-0.3 to +7	-10 to +60	20 to 150	Vo (TYP.) = 0.4 V (at L = 150 cm), ΔVo (TYP.) = 2.0 V (at L = 150 cm → 20 cm)		MAX. 50	-
GP2Y0A700K0F	Distance measuring sensor united with PSD*, infrared LED and signal processing circuit	-	-10 to +70	100 to 500			TYP. 33	-

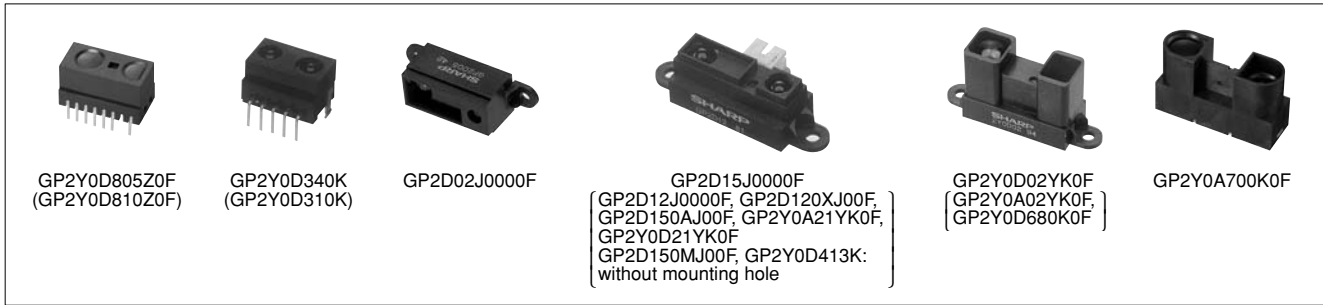
\*1 Vcc = 5 V

\* PSD: Position Sensitive Detector

The model marked with ▲ may not be available in the near future. Contact with SHARP for details before use.

### Notice

In the absence of confirmation by device specification sheets, SHARP takes no responsibility for any defects that may occur in equipment using any SHARP devices shown in catalogs, data books, etc.  
 Except where specially indicated, models listed on this page comply with the RoHS Directive\*. For details, please contact SHARP.  
 \*RoHS Directive: Prohibits use of lead, cadmium, hexavalent chromium, mercury and specific brominated flame retardants (PBBs and PBDEs), with certain exceptions.  
 Contact SHARP in order to obtain the latest device specification sheets before using any SHARP device.



## Wide Angle Sensors

(Ta = 25°C)

Model No.	Features	Absolute maximum ratings		Electro-optical characteristics					
		Vcc (V)	Topr (°C)	Distance measuring range (cm)	Output terminal voltage (V)	Output voltage difference (V)	Input voltage (V)		
							V <sub>INH</sub>	LEDL	
GP2Y3A001K0F	Distance measuring sensor united with PSD*, infrared LED and signal processing circuit, Distance measuring sensor application product, Wide range (field of view) detection using 5 infrared beams	-0.3 to +7	-10 to +60	4 to 30	TYP. 2.8*1	TYP. 1.6*4	MIN. 4.5	MAX. 0.5	
GP2Y3A002K0F		-0.3 to +7	-10 to +60	20 to 150	TYP. 2.3*2	TYP. 1.6*5	MIN. 4.5	MAX. 0.5	
GP2Y3A003K0F		-0.3 to +7	-10 to +60	40 to 300	TYP. 2.2*3	TYP. 1.2*6	MIN. 4.5	MAX. 0.5	

\* PSD: Position Sensitive Detector

L = Reflector - Sensor distance

Reflector used: White paper (Gray chart R-27/white surface, made by Kodak Corp., reflectance 90%)

\*1 L = 4 cm

\*4 Change in output voltage from L = 4 cm to 10 cm

\*2 L = 20 cm

\*5 Change in output voltage from L = 20 cm to 80 cm

\*3 L = 40 cm

\*6 Change in output voltage from L = 40 cm to 100 cm



### Notice

In the absence of confirmation by device specification sheets, SHARP takes no responsibility for any defects that may occur in equipment using any SHARP devices shown in catalogs, data books, etc.

Except where specially indicated, models listed on this page comply with the RoHS Directive\*. For details, please contact SHARP. \*RoHS Directive: Prohibits use of lead, cadmium, hexavalent chromium, mercury and specific brominated flame retardants (PBBs and PBDEs), with certain exceptions.

Contact SHARP in order to obtain the latest device specification sheets before using any SHARP device.