

GP2A16/GP2A18F

Visible Light Cut-off Type Photointerrupters with Connector

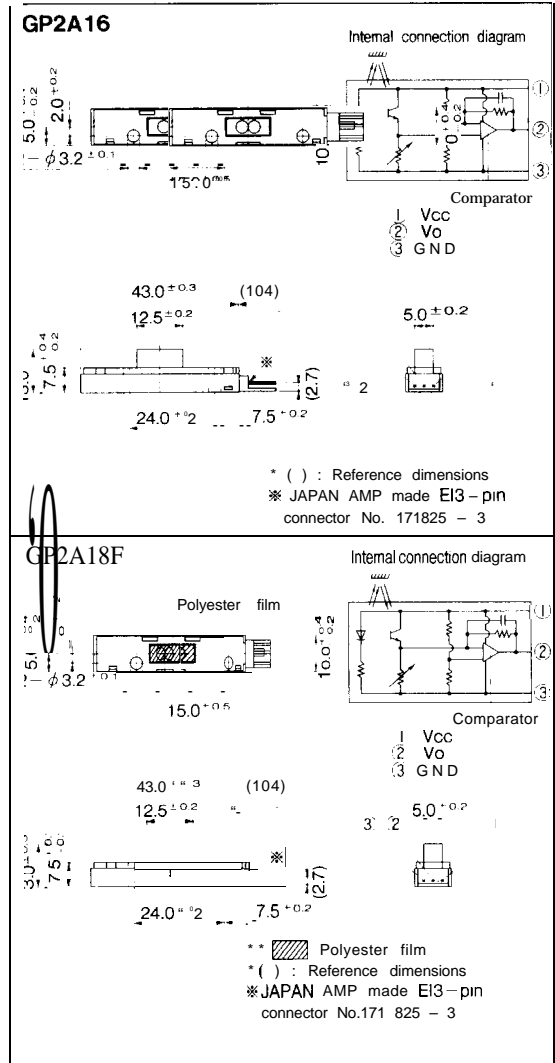
Features

1. Visible light cut-off type
2. Dust-protection type (GP2A18F)
3. Long focal distance type
Detecting range : GP2A16 : 2.0 to 7.0 mm,
GP2A18F : 4.0 to 5.0 mm
4. With a 3-pin connector for easier interface with control circuit

Applications

1. Printers
2. Copies
3. Facsimiles

Outline Dimensions (Unit " mm)



Absolute Maximum Ratings (Ta = 25°C)

Parameter	Symbol	Rating	Unit
Supply voltage	V _{CC}	7	V
*1 Output voltage	V _O	30	V
*2 Low level output current	I _{OL}	6	mA
*3 Operating temperature	T _{OPR}	-10 to +70	°C
*4 Storage temperature	T _{stg}	-40 to +80	°C

*1 At non detection (GP2A16)

At detection (GP2A18F)

*2 At detection (GP2A16)

At non detection (GP2A18F)

*3 The connector should be plugged in/out at normal temperature

Electro-optical Characteristics

(Unless otherwise specified, $V_{cc}=5V$, $T_a=25^{\circ}C$)

Parameter	Symbol	Condition	MIN.	TYP.	MAX.	Unit
Operating supply voltage	V_{cc}	$T_a = -10$ to $+70^{\circ}C$	4.5	5.0	5.5	V
Dissipation current	GP2A16	$V_{cc}=5V, R_L = \infty, *5$	-	27	50	mA
	GP2A18F					
Low level output voltage	GP2A16	$V_{cc}=5V, I_{OL} = 3mA, *4$	-	0.2	0.4	V
	GP2A18F					
High level output voltage	GP2A16	$V_{cc}=5V, R_L = 10k\Omega, *5$	4.7	-	-	V
	GP2A18F					
*6 Response time	Rise time	$R_L = 10k\Omega$	-	-	2.0	ms
	Fall time					

*4 At detection

d = 2.0 to 7.0mm using black artwork tape as the reflective object with no external disturbing light as shown in Fig.1 (GP2AI 6)

d = 4.0 to 5.0mm using white PPC paper as the reflective object with no external disturbing light as shown in Fig.1 (GP2A18F)

*5 At non detection

d = 11.0mm or more using black suede as the reflective object with no external disturbing light as shown in Fig.1 (GP2A16)

d = 4.0 to 5.0mm using black artwork tape as the reflective object with no external disturbing light as shown in Fig.1 (GP2A18F)

*6 Definition of response time .4s shown in Fig.2

Fig. 1 Vo Test Arrangement

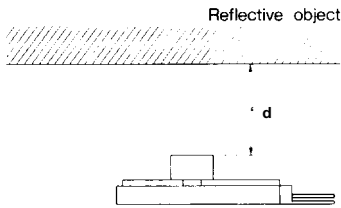
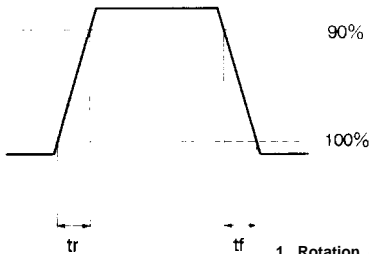
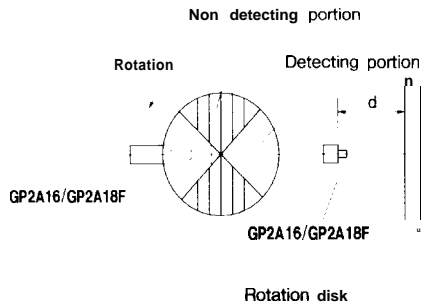


Fig. 2 Vout waveform



Test Arrangement



1. Rotation disk shall be ϕ 40mm or more. And it is in accordance with above test arrangement
2. Rotation frequency shall be 5Hz or less Output shall not be DC.

Fig. 3-a Low Level Output Voltage vs. Ambient Temperature

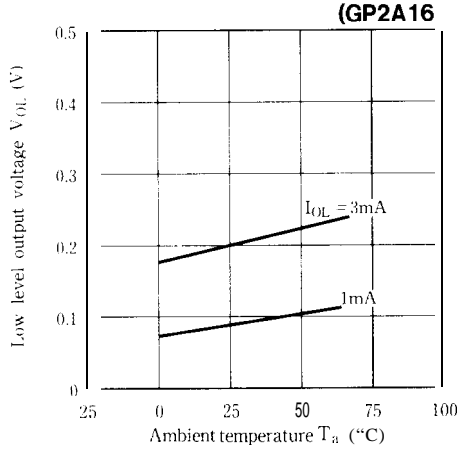


Fig. 3-b Low Level Output Voltage vs. Ambient Temperature

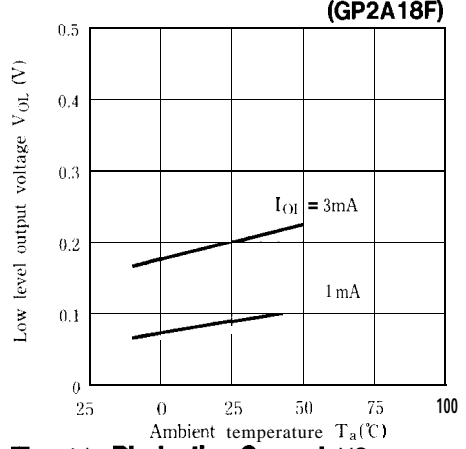


Fig. 4-a Dissipation Current vs. Supply Voltage

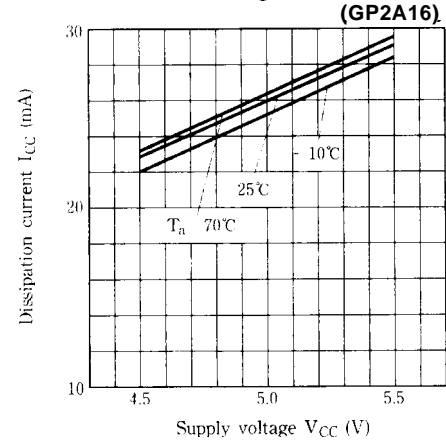


Fig. 4-b Dissipation Current vs. Supply Voltage

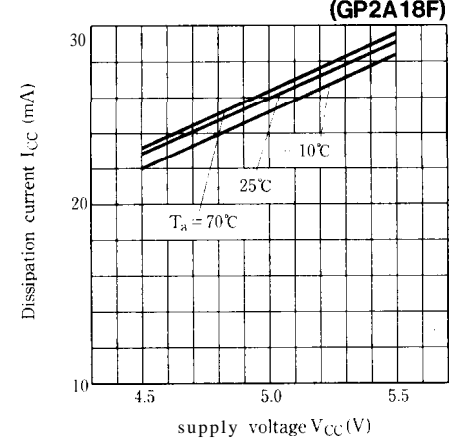


Fig. 5-a Detecting Distance Characteristics

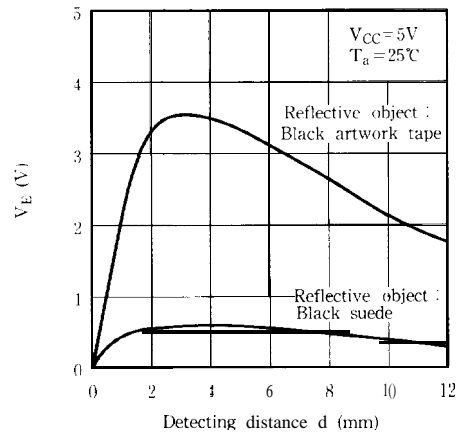
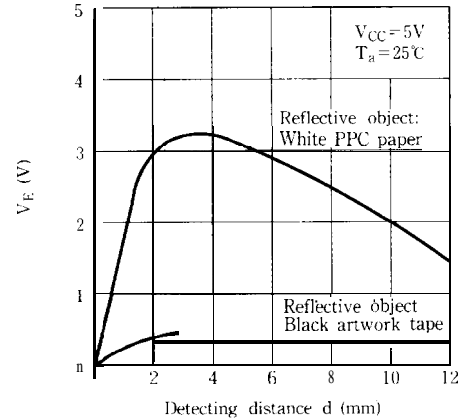
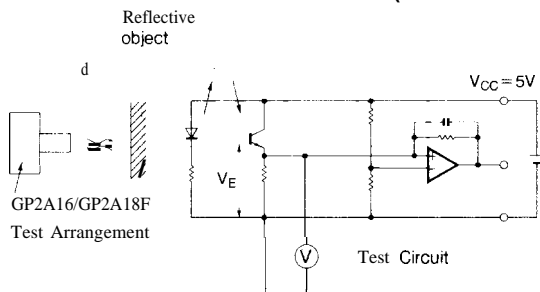


Fig. 5-b Detecting Distance Characteristics



Test Circuit for Detecting Position Characteristics
(GP2A16/GP2A18F)



■ Recommended Connectors on the Inserted Side

- JAPAN AMP made EI **series** connectors (Standard type)

Housing color	Natural color	Black	Blue	Green	Red
Housing Model No.	171822-3	2-171822-3	4-171822-3	6-171822-3	8-171822-3
Special terminal Model No.	AWG size 26 to 20	Product shape Bulk	Brass	170204-1	
			Copper phosphide	170204-2	
	Chain	Brass	170262-1		
		Copper phosphide	170262-2		
	AWG size 30 to 26	Bulk	Brass	170205-1	
			Copper phosphide	170205-2	
Chain	Brass	170263-1			
	Copper phosphide	170263-2			

- JAPAN AMP made EI **series** connectors (Low profile type)

Housing color	Natural color	Black	Blue	Green	Red	
Housing Model No.	172142-3	2-172142-3	4-172142-3	6-172142-3	8-172142-3	
Special terminal Model No. (Material : Copper phosphide)	AWG size 26 to 22	Product shape Bulk	170369-1			
			Chain	170354-1		
	AWG size 30 to 26	Chain	Bulk	1703701		
			Chain	170355-1		

- JAPAN AMP made □ **series** connectors (Amp mass terminating)

Housing terminal uni ted type connector	AWG28 (Green)	AWG26 (Natural color)	AWG 24 (Black)	AWG22 (Red)
	172054-3	172053-3	172052-3	1720513

* Terminal Material :Copper phosphide

- Please refer to the chapter “Precautions for Use” (Page 78 to 93)