



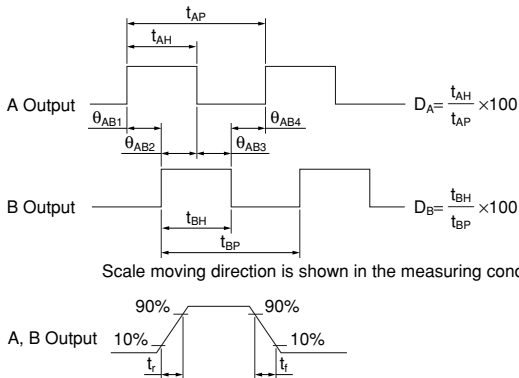
■ Electro-optical Characteristics

(T<sub>a</sub>=25°C)

Parameter		Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Input	Forward voltage	V <sub>F</sub>	I <sub>F</sub> =25mA	-	1.4	1.7	V
	Reverse current	I <sub>R</sub>	V <sub>R</sub> =1V	-	-	100	μA
Output	Operating supply voltage	V <sub>CC</sub>	-	2.7	5.0	5.5	V
	Low level output voltage	V <sub>OL</sub>	V <sub>CC</sub> =2.7 to 5.5V, I <sub>F</sub> =25mA, I <sub>OL</sub> =8mA	-	-	0.4	V
	High level output voltage	V <sub>OH</sub>	V <sub>CC</sub> =2.7 to 5.5V, I <sub>F</sub> =25mA	V <sub>CC</sub> -0.3	-	-	V
	Supply current	I <sub>CC</sub>	V <sub>CC</sub> =2.7 to 5.5V, I <sub>F</sub> =25mA, A and B low level	-	-	5	mA
*1 Transfer characteristics	Duty ratio	D <sub>A</sub> D <sub>B</sub>	V <sub>CC</sub> =2.7 to 5.5V, I <sub>F</sub> =25mA, f=10kHz, Z=0.1 to 0.6mm:GP1A037RDK, Z=0.1 to 0.5mm:GP1A037REK	35	50	65	%
	Phase difference	θ <sub>AB1 to 4</sub>					
	Response time	t <sub>r</sub>		-	1.0	2.0	μs
		t <sub>f</sub>		-	1.0	2.0	μs
Response frequency	fmax	V <sub>CC</sub> =2.7 to 5.5V, I <sub>F</sub> =25mA, Z=0.1 to 0.6mm:GP1A037RDK, Z=0.1 to 0.5mm:GP1A037REK	-	-	40	kHz	

\*1 Refer to the measuring condition. The values of transfer characteristics do not include an error of linear scale. Z is the distance between scale face and holder on the detector side

Fig.1 Output Waveforms



Scale moving direction is shown in the measuring condition (Refer to Fig.4).

Fig.2 Forward Current vs. Ambient Temperature

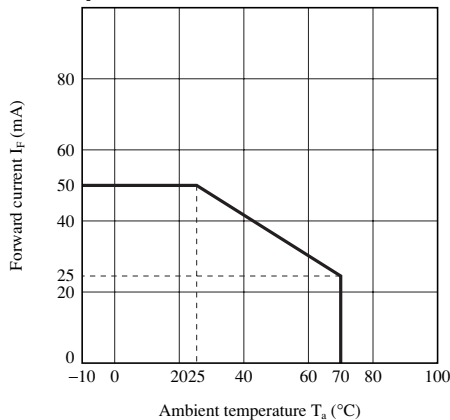


Fig.3 Output Power Dissipation vs. Ambient Temperature

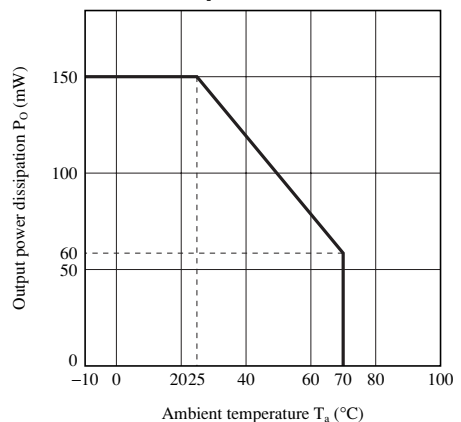
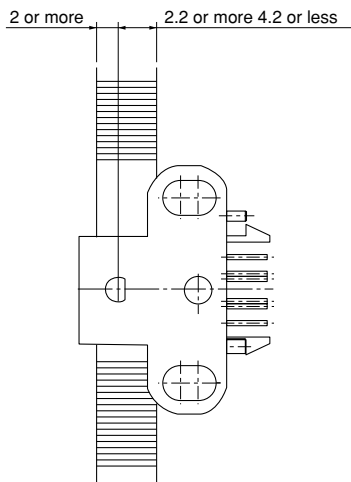
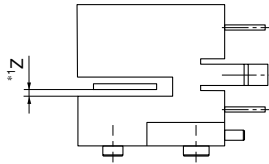
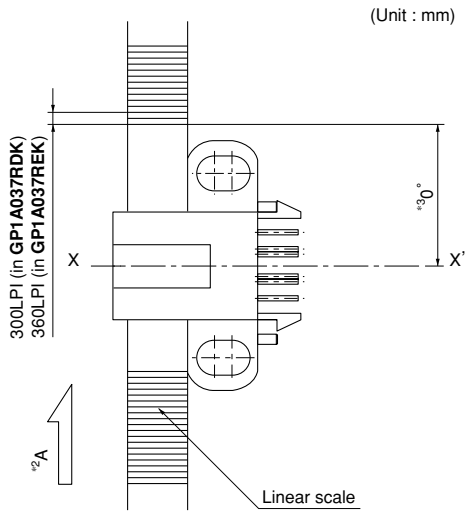


Fig.4 Measuring Condition



- \*1 Distance between scale face and holder on the detector side
- \*2 Scale moving direction
- \*3 X-X' is the line which is through the center of holder positioning pin, and it is parallel to the scale slit.

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