

# Remote control photosensitive IC

## RPM-670CBR Series

The RPM-670CBR Series consists of single-chip remote control photosensitive units in a compact, lightweight package made from a resin mold.

### ●Applications

VTRs

TVs

Audio equipment

### ●Features

- 1) Resin mold package enables compact size and light weight.
- 2) Built-in electromagnetic shield.

### ●Series models

Model	Center frequency
RPM - 678CBR - S	40kHz
RPM - 678CBR - L	
RPM - 676CBR - S	38kHz
RPM - 676CBR - L	

### ●Absolute maximum ratings (Ta=25°C)

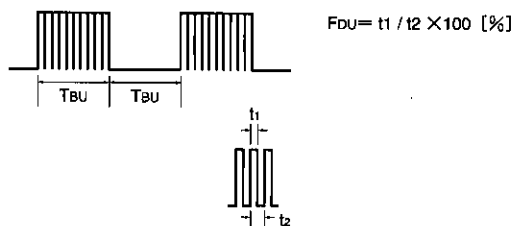
Parameter	Symbol	Limits	Unit
Power supply voltage	Vcc	6.3	V
Operating temperature	Topr	-10~+75	°C
Storage temperature	Tstg	-30~+100	°C
Solder temperature	Tsol *	260	°C

\* Within 5 seconds, 3 mm from base of lead

### ●Recommended input conditions

Remote control transmitter

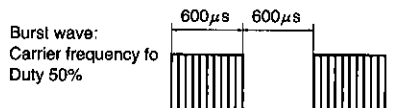
Parameter	Symbol	Min.	Typ.	Max.	Unit
Burst width	T <sub>BU</sub>	550	600	650	μsec
Carrier duty ratio	F <sub>DU</sub>	45	50	55	%



## ● Electrical and optical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Operating voltage	V <sub>CC</sub>	4.5	5.0	5.5	V	
Current consumption	I <sub>CC</sub>	—	—	3.0	mA	No external light, no input
Direction length	L	8	12	—	m	
"H" voltage	V <sub>H</sub>	4.5	—	—	V	Burst wave shown in illustration below transmitted using standard Rohm transmitter
"L" voltage	V <sub>L</sub>	—	—	0.5	V	
ON pulse width	T <sub>ON</sub>	400	600	800	μs	
OFF pulse width	T <sub>OFF</sub>	400	600	800	μs	
Center frequency	f <sub>0</sub>	—	*	—	kHz	
Directional characteristics	θ 80%	—	42	—	deg	Horizontal direction
	θ 80%	—	37	—	deg	Perpendicular direction

\* Two types: 40, 38; satisfies ON/OFF pulse width within 20 cm to direction length.



## ● Electrical and optical characteristics curves

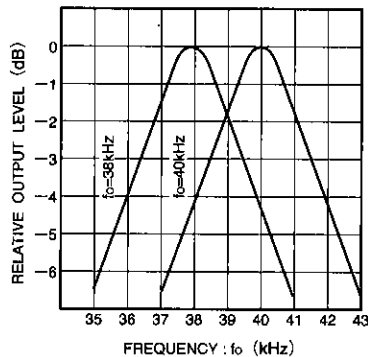


Fig. 1 B.P.F. characteristic

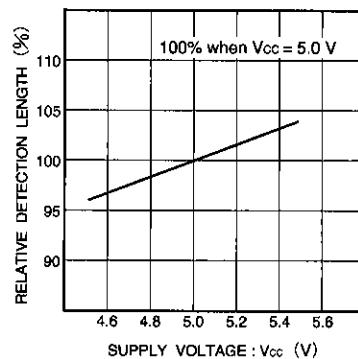


Fig. 2 Supply voltage vs. relative direction length characteristic

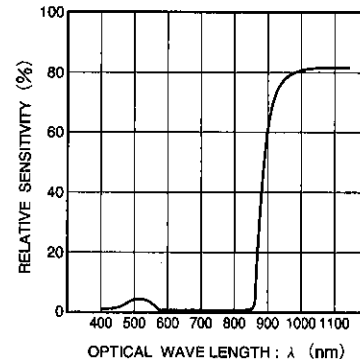
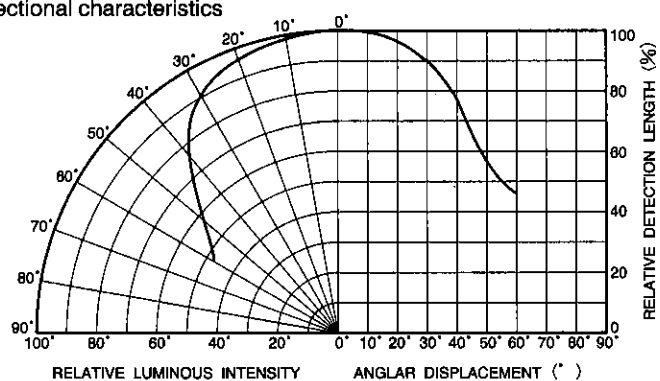


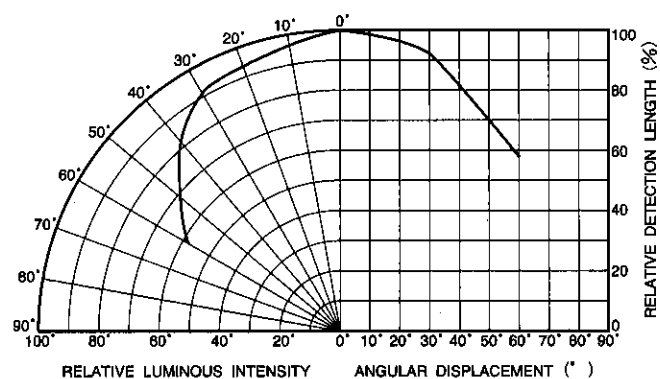
Fig. 3 Package transmittance (measured on flat board at t = 3.5 mm)

PRM670 series  
Remote control photosensitive ICs

### ● Directional characteristics

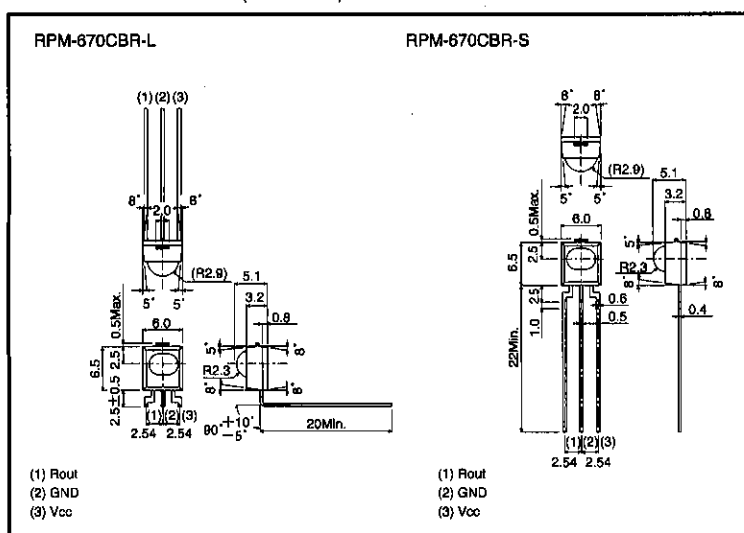


**Fig. 4 Directional characteristic in vertical direction**



**Fig. 5 Directional characteristic in horizontal direction**

●External dimensions (Unit: mm)



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