HAMAMATSU

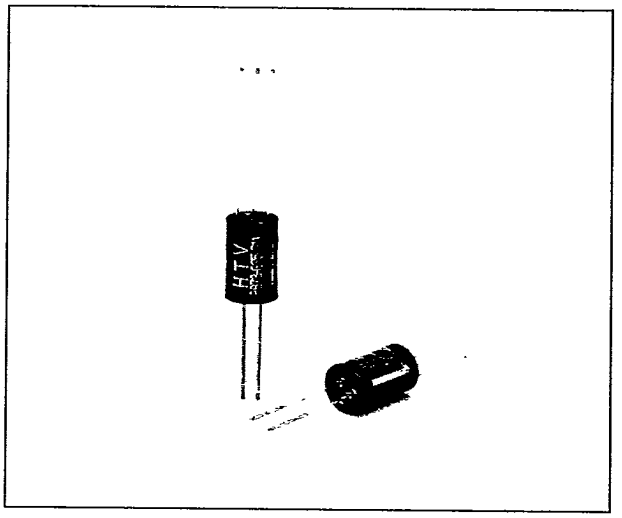
TECHNICAL DATA

DUAL CdS OUTPUT TYPE PHOTOCOUPLERS P873-G35-911, P873-13

T-41-81

LED input, Dual CdS cell output, Cylindrical package

The P873-G35-911 and P873-13 are photocouplers which use a visible LED on the input side and a dual CdS cell on the output side. The P873-G35-911 is an electrically-connected dual CdS cell, while the P873-13 employs independent dual CdS cells. Both feature low harmonic distortion, making them suitable for use in audio instruments and electronic musical instruments.



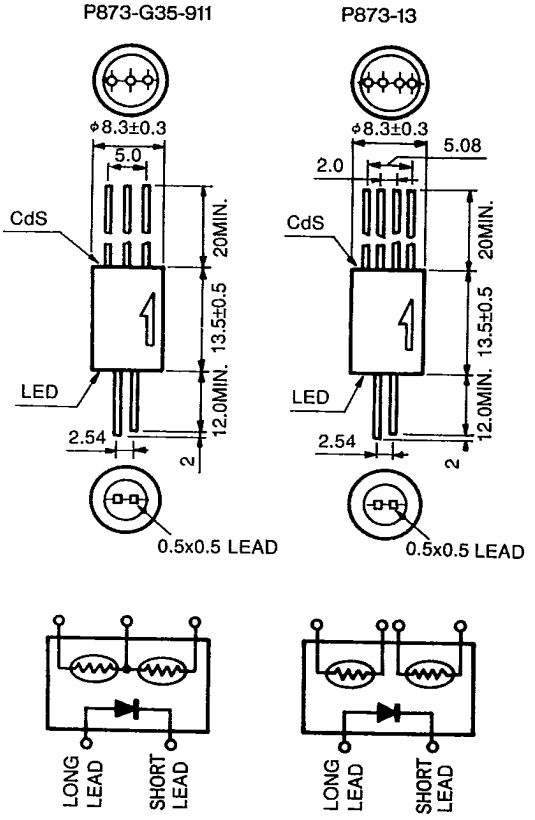
FEATURES

- **Dual CdS cell output**
- **Low harmonic distortion**
- **Cylindrical package**

APPLICATIONS

- **Audio instruments**
- **Electronic musical instruments**
- **Medical electronic equipment**

Figure 1: Dimensional Output and Pin Connection (Unit:mm)



MAXIMUM RATINGS (Ta = 25°C)

	Parameters	Symbols	Ratings	Unit
Input	Forward Current	I_F	25	mA
	Reverse Voltage	V_R	4	Vdc
	Power Dissipation	P	100	mW
Output	Supply Volage	V_S	100	Vdc
	Power Dissipation	P_O	30	mW
Operating Temperature		T_{opr}	−30 ~ +50	°C
Storage Temperature		T_{stg}	−30~ +50	°C

DUAL CdS OUTPUT PHOTOCOUPLERS P873-G35-911, P873-13

ELECTRICAL CHARACTERISTICS (Ta = 25°C, One Element)

	Parameters	Symbols	Conditions	P873-G35-911			P873-13			Unit
				Min.	Typ.	Max.	Min.	Typ.	Max.	
Input	Forward Voltage	V_F	I_F = 20mA	–	2.1	–		2.1		Vdc
	Recommended Forward Current	I_F		–	20			20		mA
Output	ON Resistance	R_{ON}	I_F = 20mA	0.3	–	1.0	–	–	10	kΩ
	OFF Resistance	R_{OFF}	10 seconds after I_F goes OFF	1	–	–	10	–	–	MΩ
Transfer Characteristics	Input-Output Isolation Voltage	V_{iso}	RH40 ~ 60%, 1 minute	5000	–	–	5000	–	–	Vrms
	Rise Time (1)	t_r	I_F = 20mA	–	5.0	20	–	4.0	20	ms
	Fall Time (1)	t_f		–	5.0	20	–	6.0	20	ms

(1) Response Time Measuring Circuit

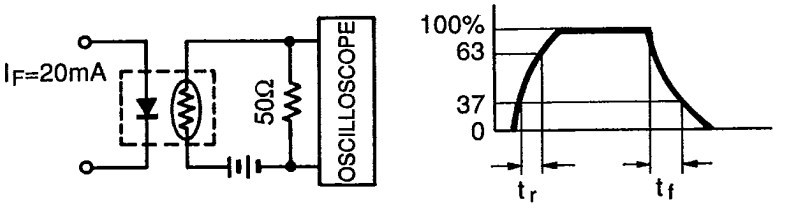


Figure 2: LED Allowable Forward Current vs. Temperature

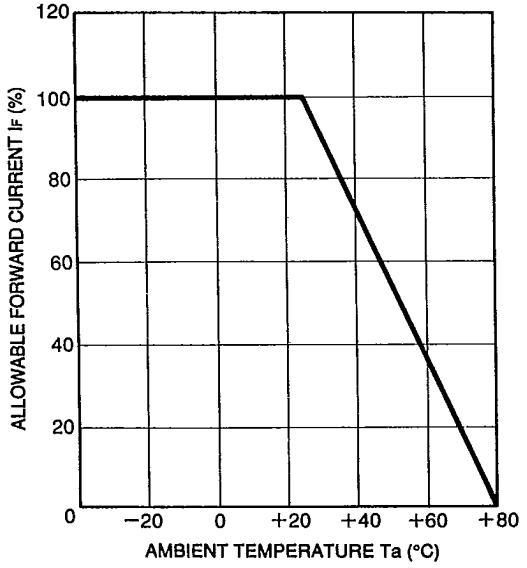


Figure 3: CdS Cell Allowable Power Dissipation vs. Temperature

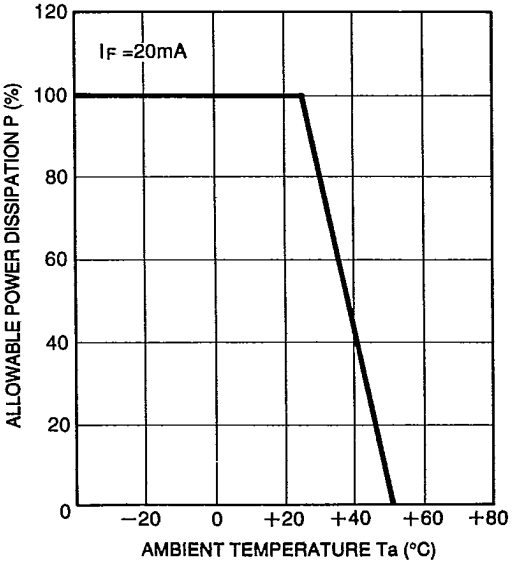


Figure 4: LED Forward Current vs. Forward Voltage

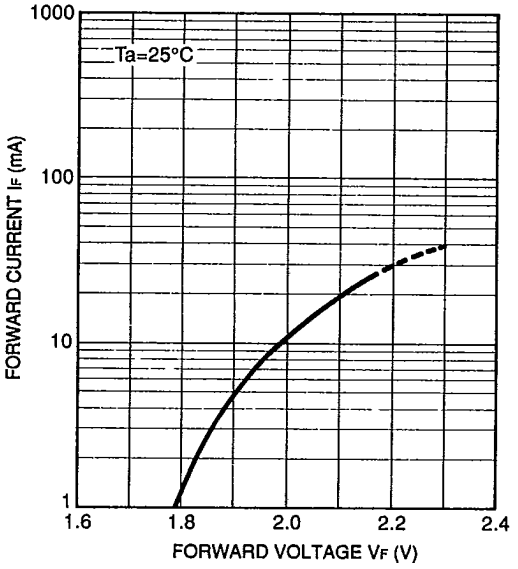


Figure 5: Output Resistance vs. Forward Current

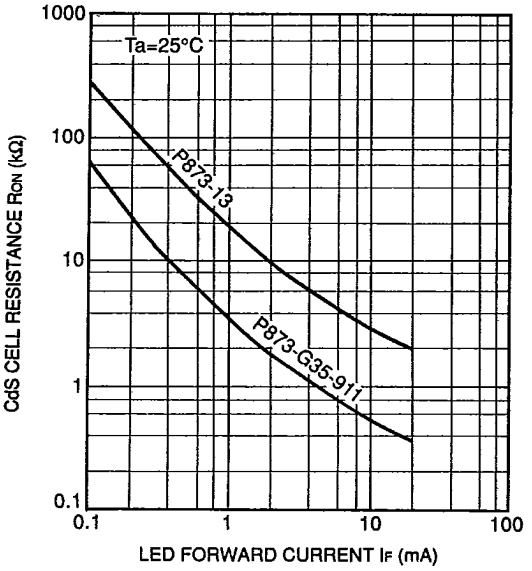


Figure 6: Rise/Fall Time vs. Load Resistance (G873-G35-911)

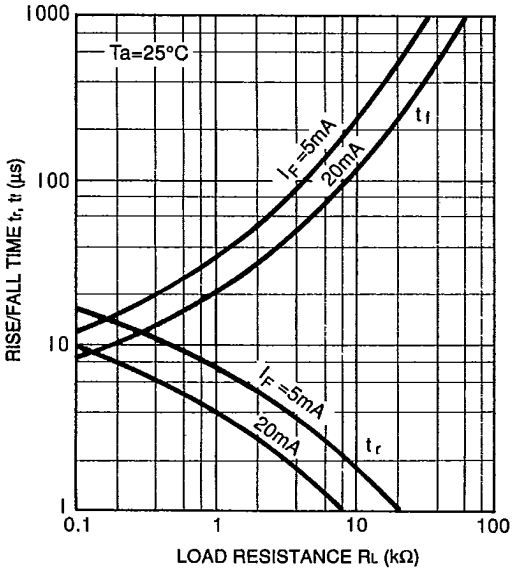


Figure 7: Output Resistance vs. Temperature (G873-G35-911)