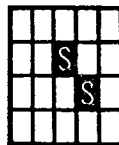


PHOTO COUPLERS
LED + CdS PHOTO COUPLERS
Ne LAMP + CdS PHOTO COUPLERS
TUNGSTEN LAMP + CdS PHOTO COUPLERS



SILICON SENSORS, INC.

HIGHWAY 18 EAST, DODGEVILLE, WI 53533, 608/935-2707
 CABLE ADDRESS: SOLAR CELL DOV • INTERNATIONAL TELEX: 910-280-1430

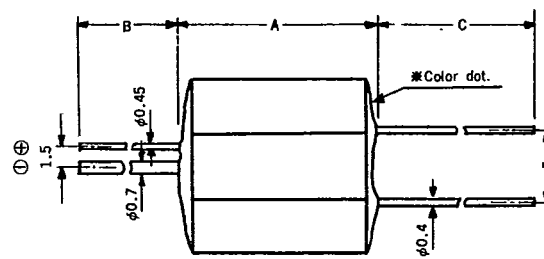
PHOTO COUPLERS

MCD-725

UL Recognized No. E74740

2W/100ms
 800V/100ms

(*) H.L.



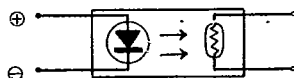
Body diameter D ϕ unit : mm

MCD-725E

UL Recognized No. E74740

MCD-725

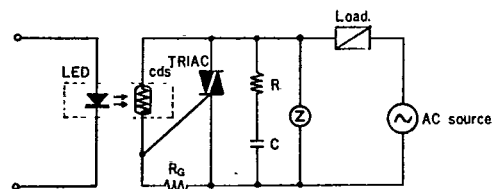
1W/100ms
 400V/100ms



	A	B	C	D
725	MAX 15.7	MIN 10	MIN 43	11.2 ϕ
725E	MAX 17.0	MIN 8.5	MIN 18.5	10.0 ϕ

CHARACTERISTICS	SYMBOL	MCD725			MCD725E			UNIT
		MIN	TYP.	MAX.	MIN.	TYP.	MAX.	
(LED)	Power Dissipation			100			80	mW
	Current — Max. Forward			35			30	mA
	Current — Forward		20			15		mA
	Voltage — Forward		2.0			1.8		V
	Voltage — Reverse; Max.			4			4	V
(CdS)	Resistance On	0.4		3.0 [ⓑ]	0.6		2.5	k Ω
	Resistance Off	1.0			3.0			M Ω
	Power-Max. Cell			90			70	mW
	Voltage — Max. Cell			350			300	Vdc
	ⓑ	Rise Time (63%)			10			10
Fall Time (37%)				10			10	ms
Voltage Isolation	V _{ISO}			3000			3000	Vdc
Temperature-Operating	T _{opr}	-20		+60	-20		+60	°C
Temperature-Storage	T _{stg}	-25		+70	-25		+70	°C

RANGE	R _{ON}	COLOR DOT	TRIAC (IGR)
H	0.9 ~ 3.0k Ω	RED	10mA
L	0.4 ~ 1.1k Ω	YELLOW	10mA



MCD725/725E

ⓑ Load resistance R_L = 1k Ω

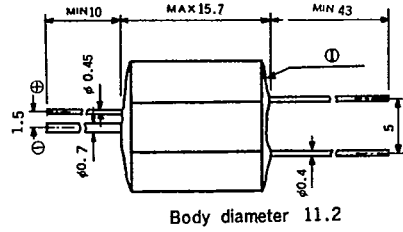
LED + CdS PHOTO COUPLERS

8253922 SILICON SENSORS INC

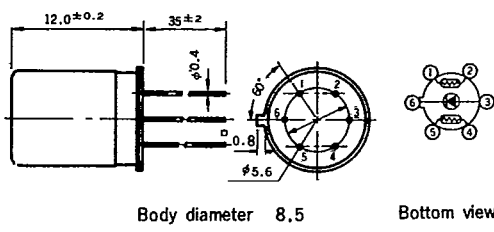
75C 00354 D T-41-73

75 DE 8253922 0000354 0

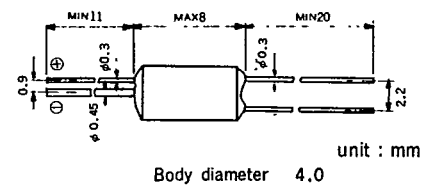
MCD-718, -735



MTD-533-6



MCD-329



unit : mm

Body diameter 4.0

T_a = 25°C

	CHARACTERISTICS	SYM BOL	MCD-718L			MCD-718H			MCD-735			MCD-537			MTD-533-6			MCD-329			UNIT
			MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	
(LED)	Power Dissipation	P _D	100			100			100			90			80			60			mW
	Current — Max. Forward	I _{FM}	40			40			35			50			40			30			mA
	Current — Forward	I _F	10			10			15			30			20			10			mA
	Voltage — Forward	V _F	2			2			1.9			1.8			2			1.6			V
	Voltage — Reverse; Max.	V _R	4			4			4			2			3			4			V
(CdS)	Resistance On	R _{ON}	8	16	12	26	0.15			5			Ⓔ 10			1			kΩ		
	Resistance Off	R _{OFF}	2			2			1			100			100			1			MΩ
	Power-Max. Cell	P _C	72			72			70			50			50			30			mW
	Voltage — Max. Cell	V _{CM}	350			350			100			300			300			100			V _{dc}
	Ⓐ Rise Time (63%)	T _R	10			10			Ⓕ 3			3			3			1			ms
Fall Time (37%)		T _F	50			50			Ⓕ 8			5			5			50			ms
Voltage Isolation	V _{ISO}	3000										500						V			
Temperature-Operating	T _{opr}	-20 ~ +50																°C			
Temperature-Storage	T _{stg}	-30 ~ +70																°C			

- MCD735 (TYP 100Ω)
- MCD718
- MCD537 MTD-533-6
- MCD-329

- Ⓔ ±20%
- Ⓕ R_L = 100Ω
- Ⓖ (CdS) L = H

Fig1 Response Time vs. Load resistance

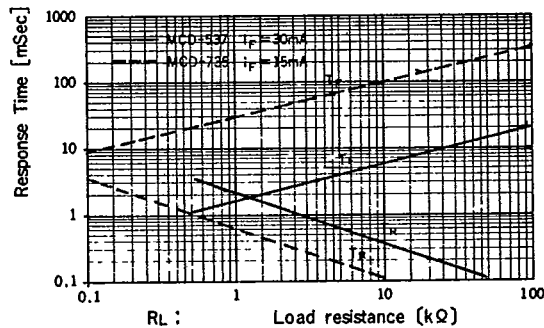


Fig3

Fig2 Derating curve of power dissipation

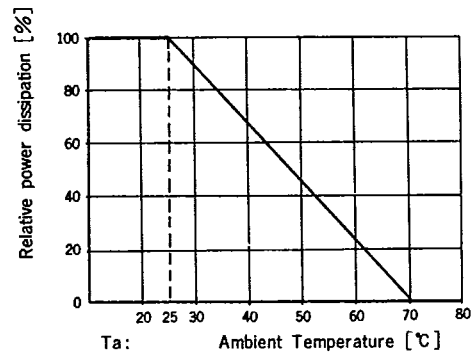
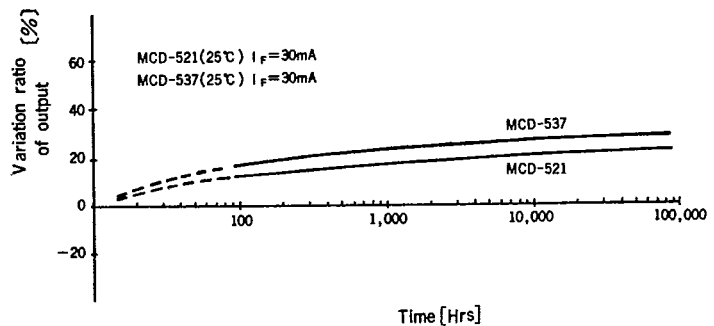
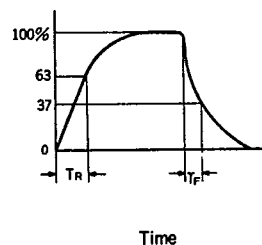
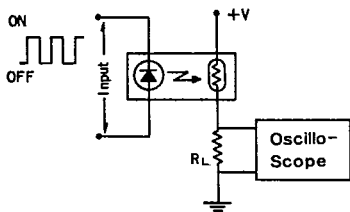


Fig5

Life Test



Ne Lamp + CdS PHOTO COUPLERS

75 DE 8253922 0000355 1

8253922 SILICON SENSORS INC

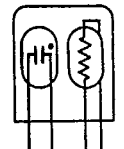
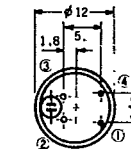
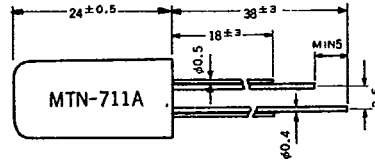
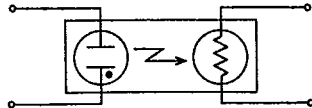
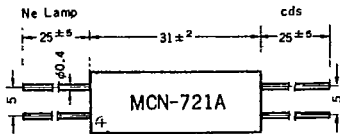
75C 00355

D

T-41-73

MCN-721A

MTN-711A



② Ne Lamp ⊕

input output

Ta = 25°C

Rating	TYP.	CHARACTERISTICS	SYM BOL	② MCN-721A			③ MTN-711A			UNIT	CONDI TION	
				MIN	TYP	MAX	MIN	TYP	MAX			
(Ne Lamp)		Lamp Current	I _{LM}			1.9			1.9	mA		
		Bleak Down	V _Z	61	68	75			75	V		
		Series Res. (R _s = 30 kΩ)	V _C		100			100		V		
(CdS)		Resistance On	R _{ON}	0.2	0.4	0.6			1.0	kΩ		
		Resistance Off	R _{OFF}	5	⑥			0.5		MΩ		
		Power-Max. Cell	P _C			125			50	mW		
		Voltage — Max. Cell	V _{CM}			150			200	V _{dc}		
		⑦	Rise Time (63%)	T _R			1			1	ms	
			Fall Time (37%)	T _F			40			80	ms	
		Voltage Isolation	V _{ISO}			500			3000	V _{dc}		
		Temperature-Operating	T _{opr}			-20 ~ +60			-20 ~ +50	°C		
		Temperature-Storage	T _{stg}			-30 ~ +70			-30 ~ +60	°C		

⑦ RL = 10k Ω

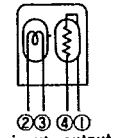
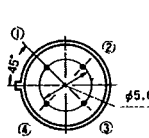
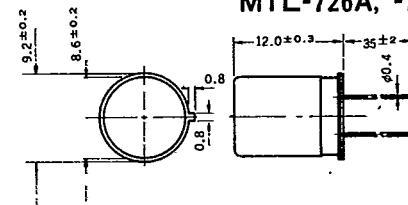
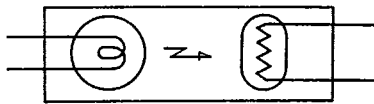
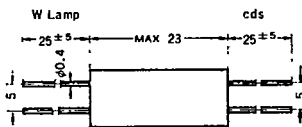
③ 100 V 30k Ω

⑥ OFF 10

TUNGSTEN LAMP + CdS PHOTO COUPLERS

MCL-703C, -723C

MTL-726A, -703C



Ta = 25°C

Rating	TYP	CHARACTERIS TICS	SYM BOL	MCL-703C			MCL-723C			MTL-726A			MTL-703C			UNIT.
				MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	
(Lamp)		Voltage — Max.	V _M			10			10			5			10	V
		Current — Max.	I _M			16			16			30			16	mA
(CdS)		Resistance On	R _{ON}	200	400	600	125	250	375	30	60	90	100	200	300	Ω
		Res. @ 1/2 R.L.V.	R _{1/2 ON}			4			3			0.5			3	kΩ
		Resistance Off	R _{OFF}	5			5			5			5			MΩ
		Power-Max. Cell	P _C			50			125			125			50	mW
		Voltage — Max. Cell	V _{CM}			150			150			150			150	V _{dc}
		⑧	Rise (63%)	T _R			10			8			6			8
	Fall (37%)		T _F			120			60			60			120	ms
		Voltage Isolation	V _{iso}			500										V _{dc}
		Temp-Operating	T _{opr}			-20 ~ +60										°C
		Temp-Storage	T _{stg}			-30 ~ +70										°C