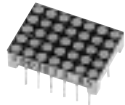


Dot Matrix LED

■ General Description

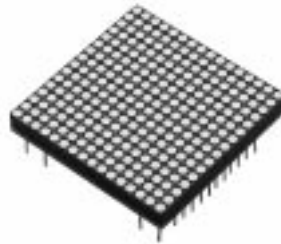
Sharp's dot matrix LEDs can express characters and symbols on a display.
 (Number of dots: 5X7, 8X8, 16X16). We can supply wide color variation;
 high-luminosity red T series, yellow-green E series, sunset orange S series,
 dichromatic emission, etc.



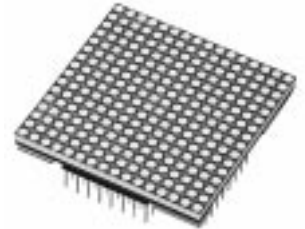
LT5038T



LT5017ED



LT5040ET



LT5016ED

■ Dot Matrix LED

Number of dots	Outline dimensions (mm)	Common pins	Radiation color					Outline dimensions			
			T Red (High-luminosity)	D Red	S Sunset orange	E Yellow-green	E T Yellow-green+ Red (High-luminosity)	E D Yellow green + Red	Page	Figure	
5X7	12.7X17.8	K	LT5038T							1	
		A	LT5037T								
8X8	20X20	K						LT5017ED	→	2 3	
		A	LT5010T	LT5010D				LT5027ED			
		K									
	30.2X30.2	K		LT5105D		LT5105E				→	4
		A		LT5106D	LT5106S	LT5106E					
		K									
31.8X31.8	K						LT5007ED	→	5 5/6		
	A		LT5008D		LT5008E		LT5008ED				
16X16	31.9X31.9	K	LT5013T						→	7	
		A		LT5014D	LT5014S	LT5014E					
		K					LT5040ET				
	40X40	K		LT5005D	LT5005S	LT5005E			→	8 9 10	
		A	LT5005T								
		K					LT5050ET				
	64X64	A						LT5016ED	→	11 12	
		K						LT5026ED			

*1 Common pins show row.(Column row)

Dot Matrix LED

Absolute Maximum Ratings Figures shown below are values per dot.

(Ta=25°C)

Number of dots	Outline dimensions (mm)	Radiation color	Model No.		Forward current I _F (mA)	Peak forward current I _{FM} (mA)	Derating factor (mA/°C) Pulse	Reverse voltage V _R (V)	Operating temperature T _{opr.} (°C)	Storage temperature T _{stg.} (°C)
			Anode common*1	Cathode common*1						
5X7	12.7X17.8	Red(High-luminosity)	LT5037T	LT5038T	15	50 ³	1.45	5	-20 to +60	-20 to +80
8X8	20X20	Yellow-green/Red		LT5017ED	15	50 ²	0.91	5	-20 to +60	-20 to +80
		Yellow-green/Red		LT5027ED	15	50 ²	0.91	5	-20 to +60	-20 to +80
	30.2X30.2	Red(High-luminosity)	LT5010T		15	50 ²	0.91	5	-20 to +60	-20 to +70
		Red	LT5010D		15	50 ²	0.91	5	-20 to +60	-20 to +80
		Red	LT5106D	LT5105D	20	50 ²	0.91	5	-20 to +70	-20 to +80
		Sunset orange	LT5106S		20	50 ²	0.91	5	-20 to +70	-20 to +80
	31.8X31.8	Yellow-green	LT5106E	LT5105E	20	50 ²	0.91	5	-20 to +60	-20 to +80
		Yellow-green/Red	LT5008ED	LT5007ED	15	50 ²	0.91	5	-20 to +60	-20 to +80
		Red	LT5008D		15	50 ²	0.91	5	-20 to +60	-20 to +80
		Yellow-green	LT5008E		15	50 ²	0.91	5	-20 to +60	-20 to +80
16X16	31.9X31.9	Red(High-luminosity)		LT5013T	15	80 ³	1.45	5	-20 to +60	-20 to +80
		Red	LT5014D		15	80 ³	1.45	5	-20 to +60	-20 to +80
		Sunset orange	LT5014S		15	80 ³	1.45	5	-20 to +60	-20 to +80
		Yellow-green	LT5014E		15	80 ³	1.45	5	-20 to +60	-20 to +80
	31.7X31.7	Yellow-green/Red(High-luminosity)	LT5040ET		15	50 ²	1.45	5	-20 to +60	-20 to +80
		Red(High-luminosity)	LT5005T		15	80 ³	1.45	5	-20 to +60	-20 to +80
	40X40	Red		LT5005D	15	80 ³	1.45	5	-20 to +60	-20 to +80
		Sunset orange		LT5005S	15	80 ³	1.45	5	-20 to +60	-20 to +80
		Yellow-green		LT5005E	15	80 ³	1.45	5	-20 to +60	-20 to +80
		Yellow-green/Red(High-luminosity)	LT5050ET		15/15	50/50 ³	1.45/1.45	5/5	-20 to +60	-20 to +80
	64X64	Yellow-green/Red	LT5016ED		15	80 ³	1.45	5	-20 to +60	-20 to +80
	96X96	Yellow-green/Red	LT5026ED		15	80 ³	1.45	5	-20 to +60	-20 to +80

*1 Common pins show row.(Column row) *2 Duty ratio=1/10, Pulse width=0.1ms

*3 Duty ratio=1/16, pulse width=0.1ms

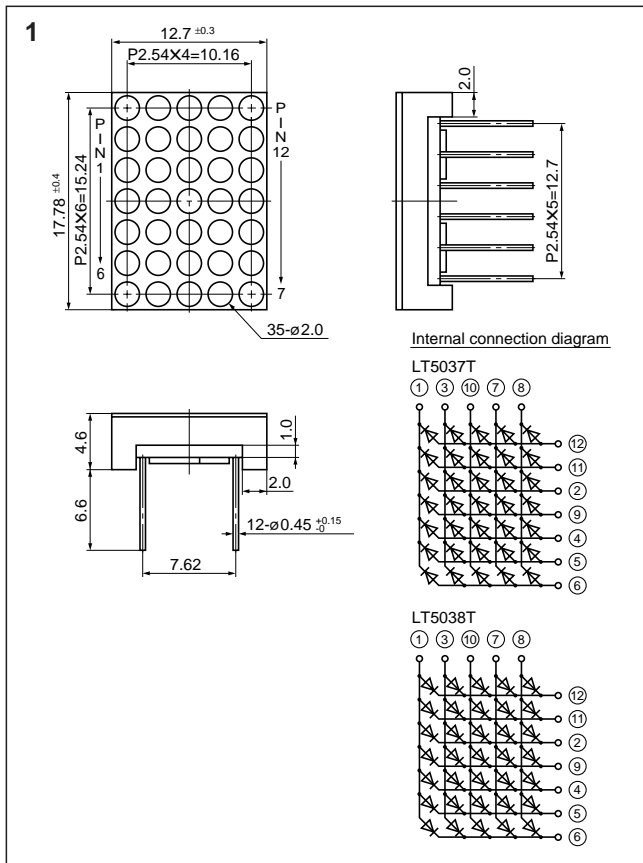
Electro-optical Characteristics Figures shown below are values per dot.

(Ta=25°C)

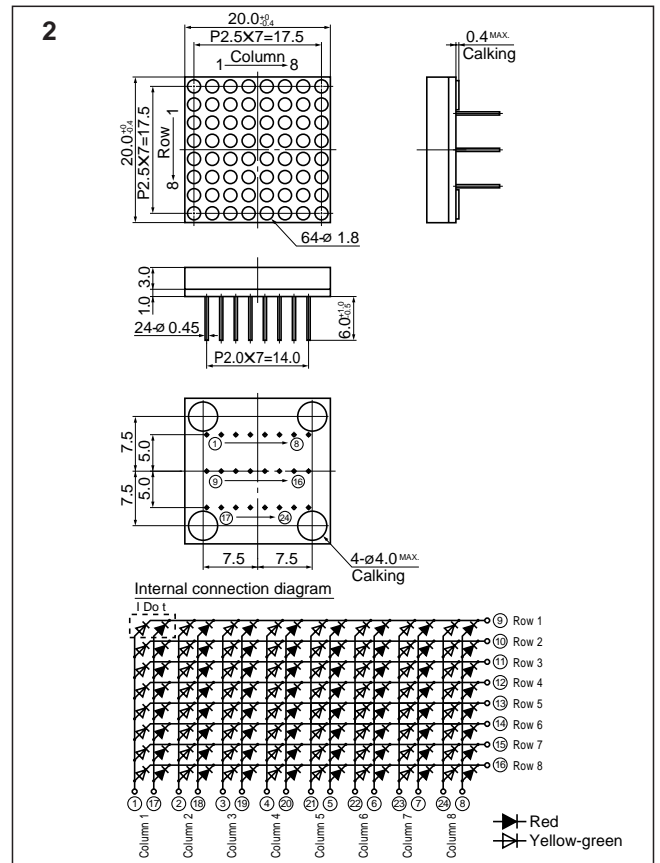
Number of dots	Outline dimensions (mm)	Radiation color	Model No.		Forward voltage ^{*2} V _F (V)		Luminous intensity ^{*3} I _v (mcd) TYP.	Peak emission wavelength λ _p (nm) TYP.	Spectrum radiation bandwidth Δλ(nm) TYP.		Reverse current I _R (μA) MAX. V _R (V)	
			Anode common*1	Cathode common*1	TYP.	MAX.			I _F (mA)	I _R (μA) MAX.	V _R (V)	
5X7	12.7X17.8	Red(High-luminosity)	LT5037T	LT5038T	1.85	3.0	(4.5)	660	20	50	100	4
8X8	20X20	Yellow-green/Red*		LT5017ED	2.4/2.2	3.0	1.9/1.6	565/635	30/35	50	10	4
		Yellow-green/Red*		LT5027ED	2.4/2.2	3.0	2.5/2.0	565/635	30/35	50	10	4
	30.2X30.2	Red(High-luminosity)	LT5010T		1.85	2.3	2.2	660	20	50	10	4
		Red	LT5010D		2.2	2.7	1.11	635	35	50	10	4
		Red	LT5106D	LT5105D	2.2	2.7	1.11	635	35	10	10	4
		Sunset orange	LT5106S		2.2	2.7	1.11	610	35	10	10	4
	31.8X31.8	Yellow-green	LT5106E	LT5105E	2.4	2.7	1.69	565	30	10	10	4
		Yellow-green/Red*	LT5008ED	LT5007ED	2.4/2.2	3.0/2.7	2.08/1.56	565/635	30/35	50	10	4
		Red	LT5008D		2.2	3.0	2.03	635	35	50	10	4
		Yellow-green	LT5008E		2.4	3.0	2.7	565	30	50	10	4
16X16	31.9X31.9	Red(High-luminosity)		LT5013T	1.85	3.0	1.35	660	20	50	10	4
		Red	LT5014D		2.2	3.0	1.3	635	50	35	10	4
		Sunset orange	LT5014S		2.2	3.0	1.11	610	35	50	10	4
		Yellow-green	LT5014E		2.4	3.0	1.7	565	30	50	10	4
	31.7X31.7	Yellow-green/Red(High-luminosity)*	LT5040ET		2.4/1.85	3.0	1.45/1.70	565/660	30/20	50	100	3
		Red(High-luminosity)	LT5005T		1.85	3.0	1.78	660	20	50	10	4
	40X40	Red		LT5005D	2.2	2.7	1.04	635	35	50	10	4
		Sunset orange		LT5005S	2.2	2.7	1.11	610	35	50	10	4
		Yellow-green		LT5005E	2.4	3.0	1.3	565	30	50	10	4
		Yellow-green/Red(High-luminosity)*	LT5050ET		2.4/1.85	3.0	(1.9)/(3.0)	565/660	30/20	10	100	3
	64X64	Yellow-green/Red*	LT5016ED		2.4/2.2	3.0	5.2/3.9	565/635	30/35	50	10	4
	96X96	Yellow-green/Red*	LT5026ED		2.4/2.2	3.0	7.15/5.85	565/635	30/35	50	10	4

* Each figure shown in the table is yellow-green/red. *1 Common pins show row.(Column row) *2 I_{FM}=50mA *3 I_F=10mA

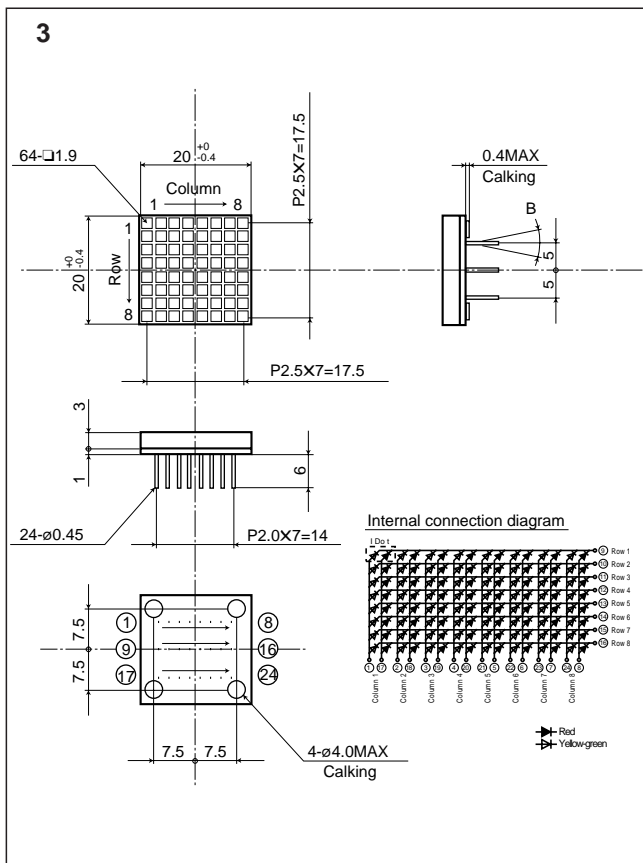
Dot Matrix LED Outline Dimensions(Unit:mm)



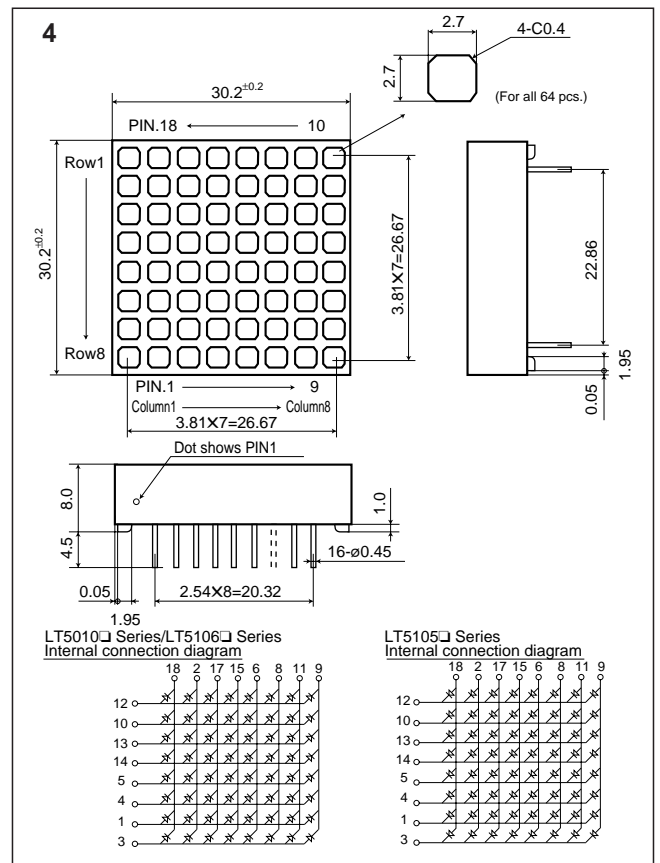
LT5037T/LT5038T



LT5017ED



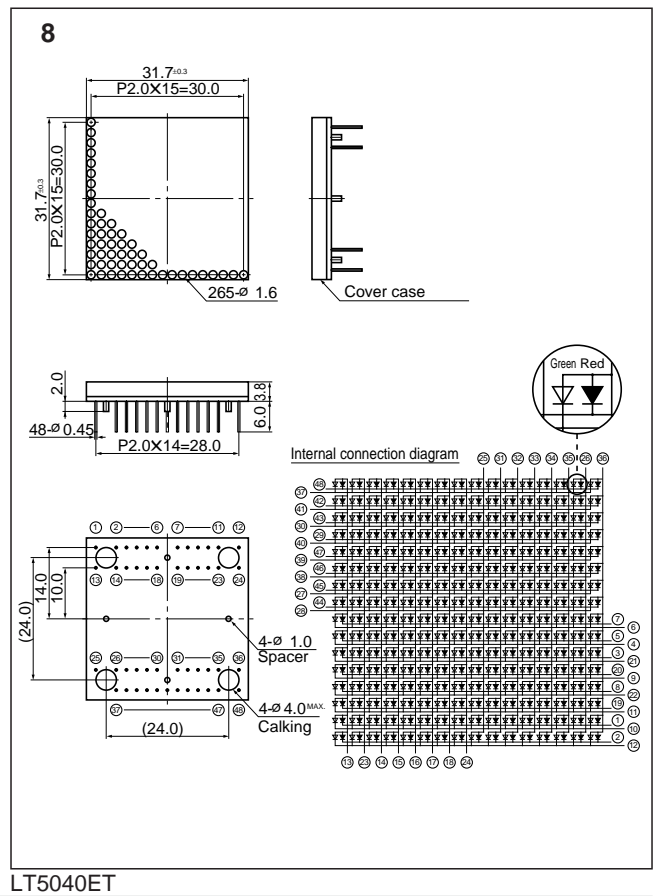
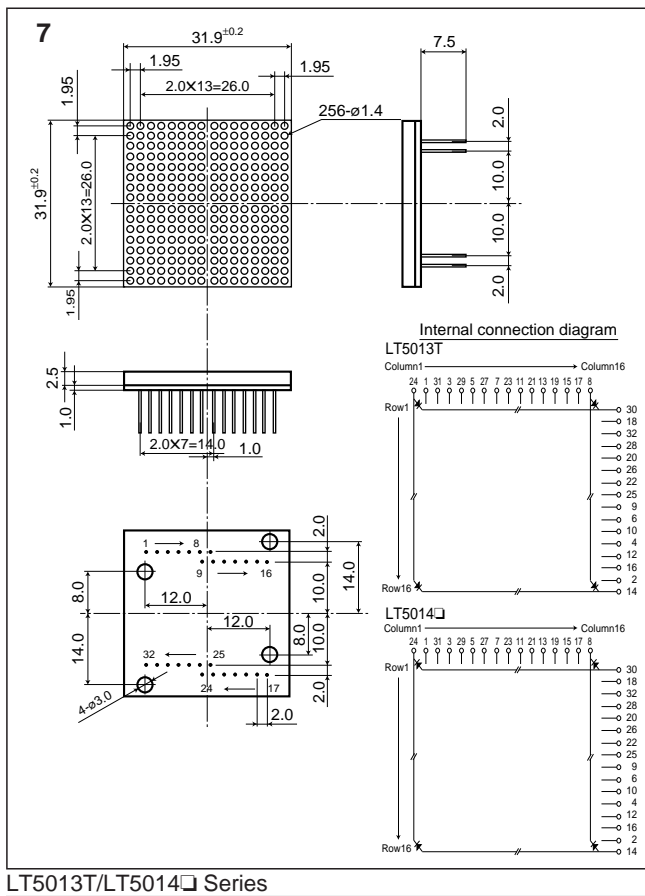
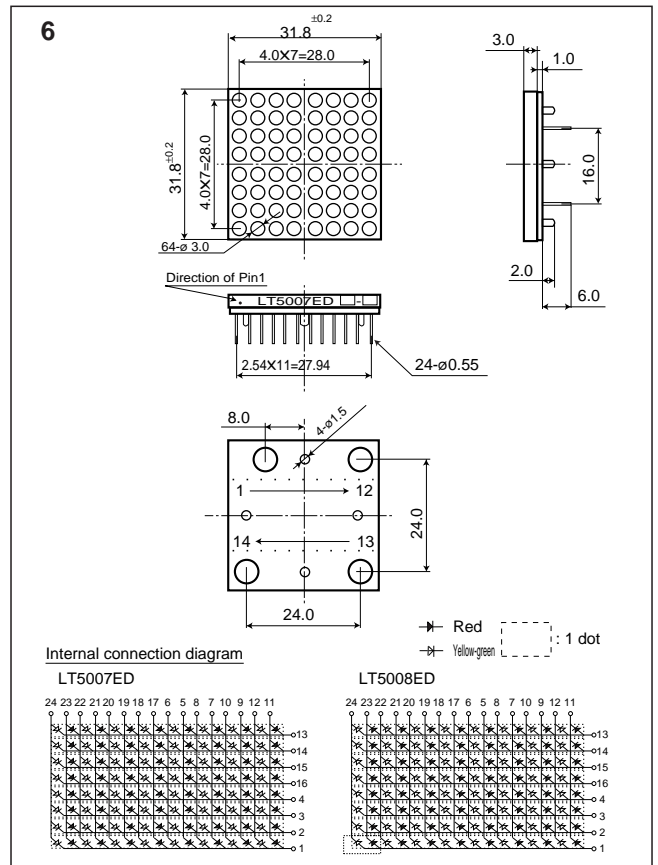
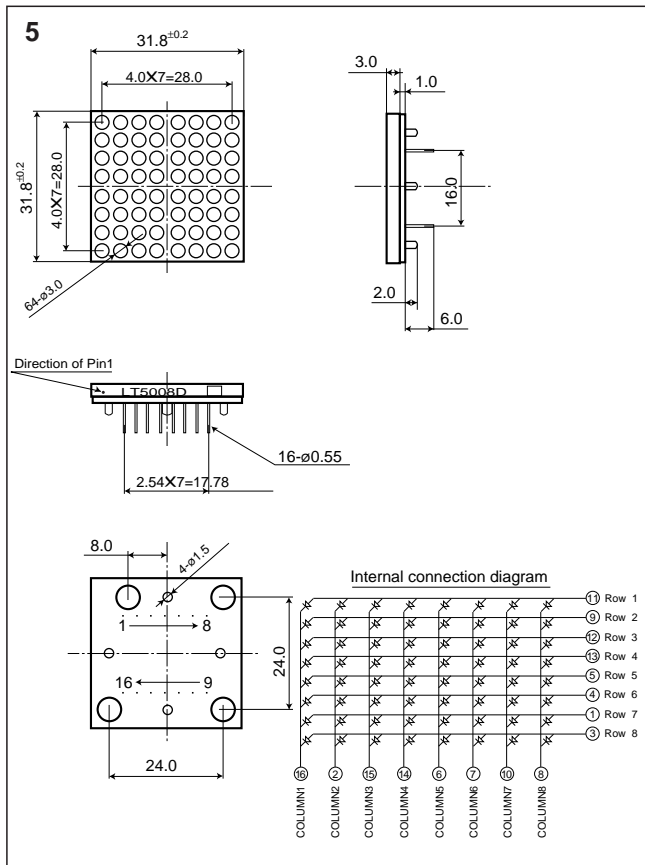
LT5027ED



LT5010 Series LT5105 Series/LT5106 Series

(Notice) • In the absence of confirmation by device specification sheets, SHARP takes no responsibility for any defects that may occur in equipment using any SHARP devices shown in catalogs, data books, etc. Contact SHARP in order to obtain the latest device specification sheets before using any SHARP device.
 (Internet) • Data for sharp's optoelectronic/power device is provided for internet.(Address <http://www.sharp.co.jp/ecg/>)

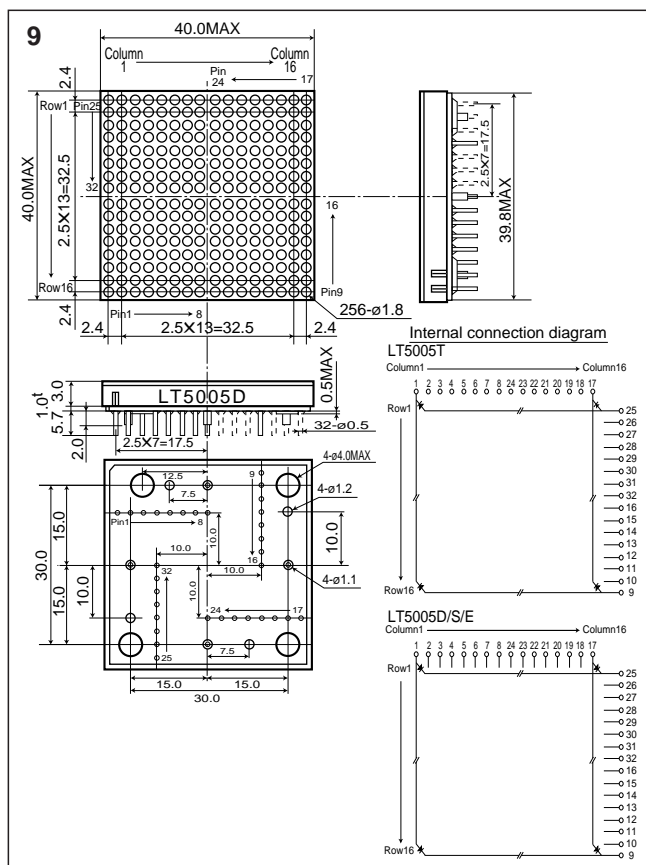
Dot Matrix LED Outline Dimensions(Unit:mm)



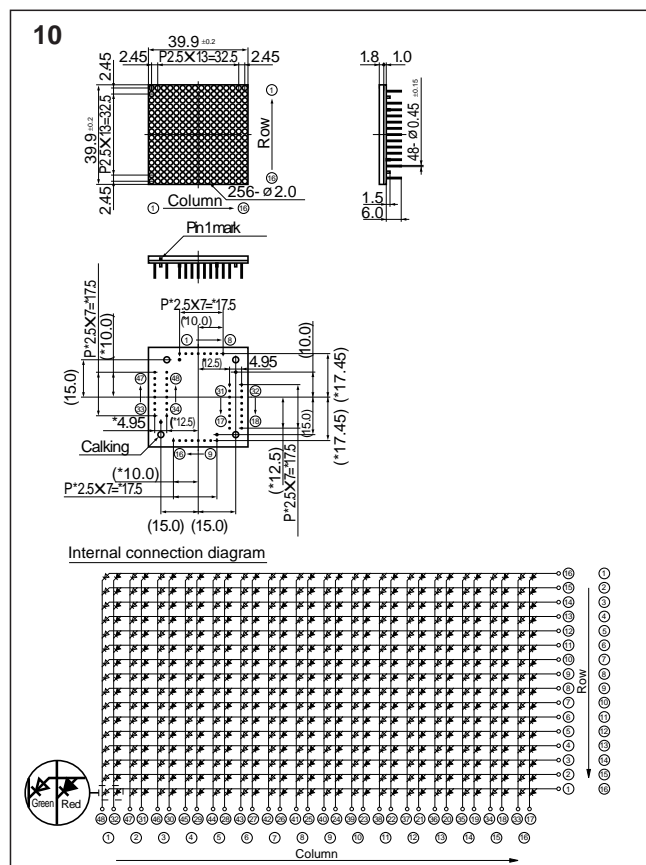
(Notice) • In the absence of confirmation by device specification sheets, SHARP takes no responsibility for any defects that may occur in equipment using any SHARP devices shown in catalogs, data books, etc. Contact SHARP in order to obtain the latest device specification sheets before using any SHARP device.

(Internet) • Data for sharp's optoelectronic/power device is provided for internet.(Address <http://www.sharp.co.jp/ecg/>)

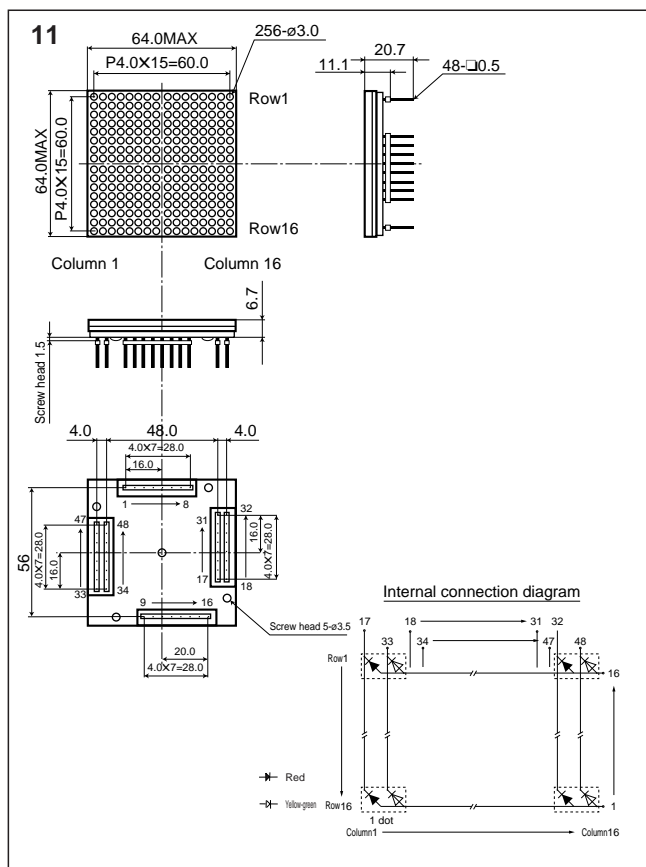
Dot Matrix LED Outline Dimensions(Unit:mm)



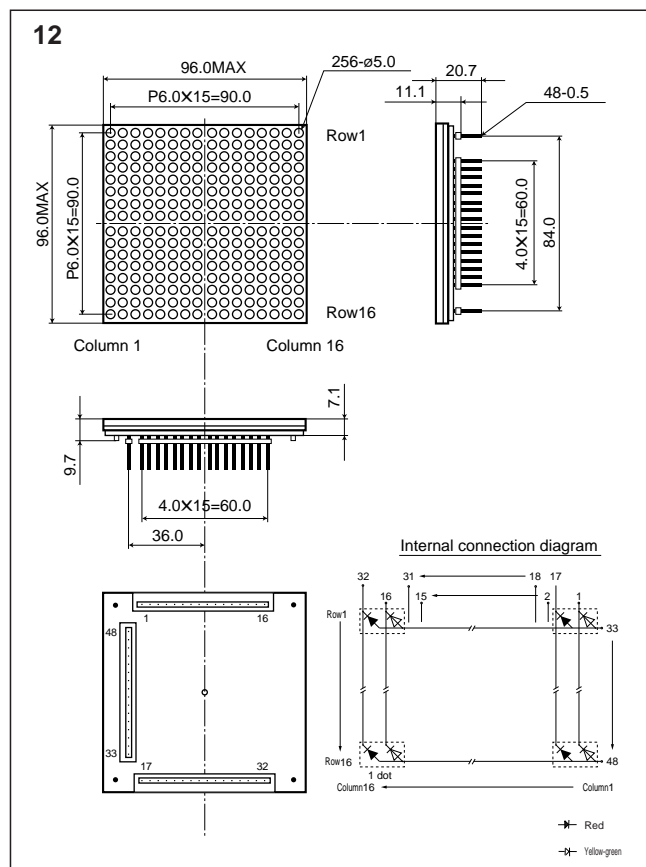
LT5005□ Series



LT5050ET



LT5016ED



LT5026ED

(Notice) • In the absence of confirmation by device specification sheets, SHARP takes no responsibility for any defects that may occur in equipment using any SHARP devices shown in catalogs, data books, etc. Contact SHARP in order to obtain the latest device specification sheets before using any SHARP device.
 (Internet) • Data for sharp's optoelectronic/power device is provided for internet.(Address <http://www.sharp.co.jp/ecg/>)