

LT5005□ Series

16x 16 Dot Matrix LEDs

■ Model No.

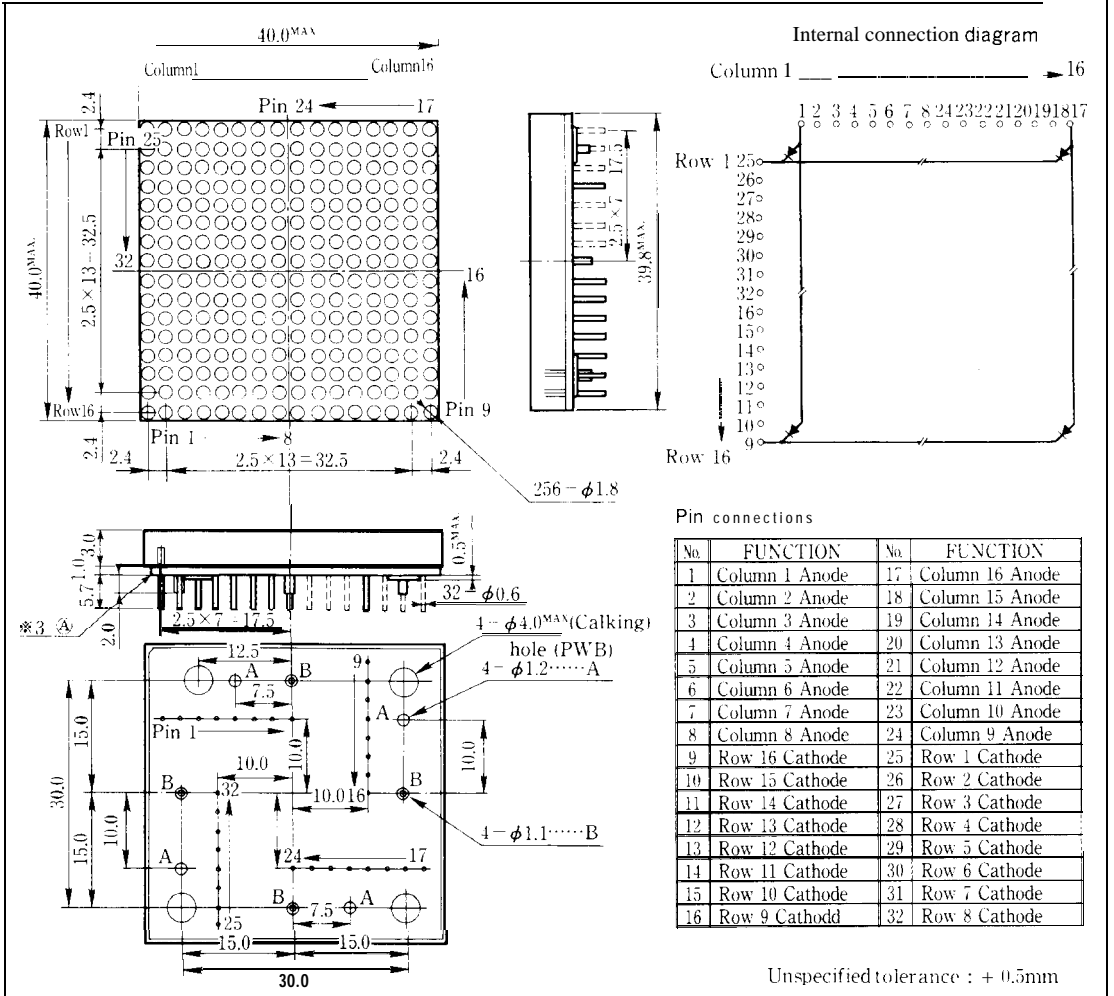
LT5005D Red GaAsP/GaP
 LT5005S Sunset orange GaAsP/GaP
 LT5005E Yellow-green GaP

■ Features

1. Substrate type
2. 1.48" character height

■ Outline Dimensions

(Unit: mm)



LT5005□

■ Absolute Maximum Ratings

(Ta = 25°C)

Parameter		Symbol	LT5005D LT5005E				Unit
			LT5005S				
*1 Power dissipation		P	1800	1800			mW
Continuous forward current	Per dot	I _F	15	15			mA
*2 Peak forward current	Per dot	I _{FM}	80	80			mA
Derating factor	Per dot	DC	—	—	—		mA/°C
		Pulse	—	1.45	1.45		mA/°C
Reverse voltage	Per dot	V _R	5	5			V
Operating temperature		T _{opr}	-20 to +60				°C
Storage temperature		T _{stg}	-20 to +80				°C
*3 Soldering temperature		T _{sol}	260 (within 5 seconds)				°C

*1 Per device

*2 Duty ratio = 1/16, Pulse width = 0.1ms, Lighting ratio = 50%

When a unit is driven over half rate of lighting, a heat sink must be installed

*3 At the position of 3.6 mm from Ⓐ level of outline dimensions

LT5005D(Red)

■ Electro-optical Characteristics ※4

(Ta = 25°C)

Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V _F	LT5005D	I _F = 10mA	-	1.9	-	V
		LT5005D	I _{FM} = 50mA	-	2.2	2.7	
※5 Luminous intensity	I _v	LT5005D	I _F = 10mA	0.80	1.4	-	mcd
Peak emission wavelength	λ _p	LT5005D	I _{FM} = 50mA	-	635	-	nm
Spectrum radiation bandwidth	Δλ	LT5005D	I _{FM} = 50mA	-	35	-	nm
Reverse current	I _R	LT5005D	V _R = 4V	-	-	10	μA
Response frequency	f _c	LT5005D	-		4		MHz

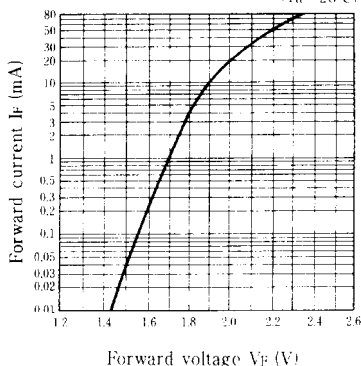
※4 Per dot

※5 Tolerance: ±30%

■ Characteristics Diagrams

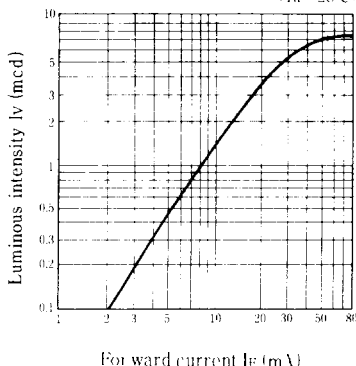
Forward Current vs. Forward Voltage

(Ta = 25°C)

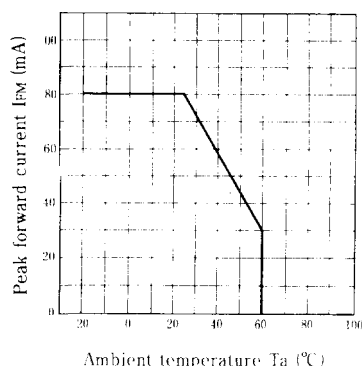


Luminous Intensity vs. Forward Current

(Ta = 25°C)

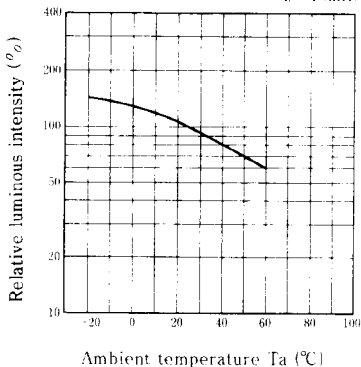


Peak Forward Current Derating Curve



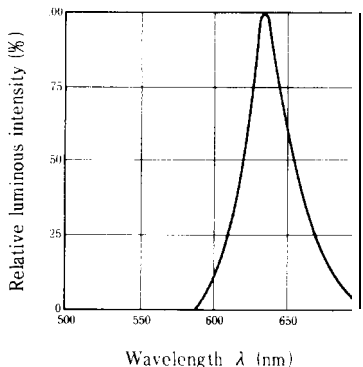
Relative Luminous Intensity vs. Ambient Temperature

(I_F = 10mA)



Spectrum Distribution

(Ta = 25°C)



LT5005S(Sunset orange)

Electro-optical Characteristics ※4

(Ta=25°C)

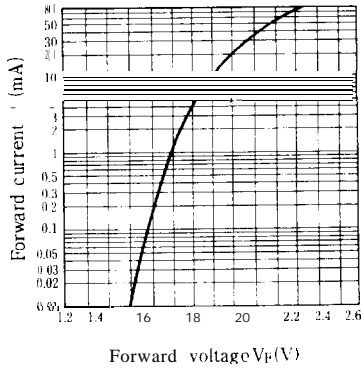
Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V _F	LT5005S	I _F = 10mA	-	1.9	-	V
		LT5005S	I _{FM} = 50mA	-	2.2	2.7	
※5 Luminous intensity	I _v	LT5005S	I _F = 10mA	0.50	1.4	-	mcd
Peak emission wavelength	λ _p	LT5005S	I _{FM} = 50mA	-	610	-	nm
Spectrum radiation bandwidth	Δλ	LT5005S	I _{FM} = 50mA	-	35	-	nm
Reverse current	I _R	LT5005S	V _R = 4V	-	-	10	μA
Response frequency	f _c	LT5005S	-	-	4	-	MHz

※4 Per dot

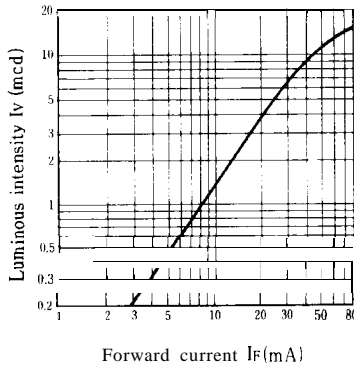
※5 Tolerance: ±30%

Characteristics Diagrams

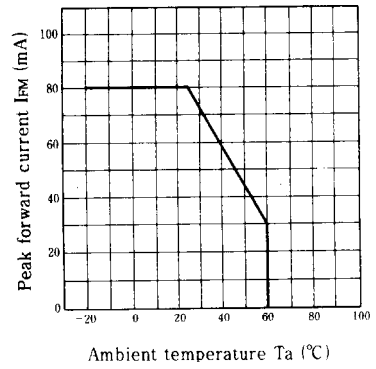
Forward Current vs. Forward Voltage



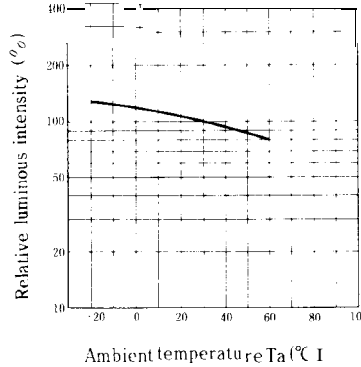
Luminous Intensity vs. Forward Current



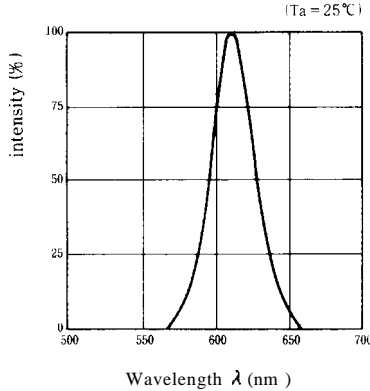
Peak Forward Current Derating Curve



Relative Luminous Intensity vs. Ambient Temperature



Spectrum Distribution



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LT5005E (Yet low-green)

■ Electro-optical Characteristics ※4

(Ta = 25°C)

Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V _F	LT5005E	I _F = 10mA	—	2.0	—	V
		LT5005E	I _{FM} = 50mA	—	2.4	3.0	
※5 Luminous intensity	I _v	LT5005E	I _F = 10mA	1.0	1.7	—	mcd
Peak emission wavelength	λ _p	LT5005E	I _{FM} = 50mA	—	565	—	nm
Spectrum radiation bandwidth	Δλ	LT5005E	I _{FM} = 50mA	—	30	—	nm
Reverse current	I _R	LT5005E	V _R = 4V			10	μA
Response frequency	f _c	LT5005E	—		4	—	MHz

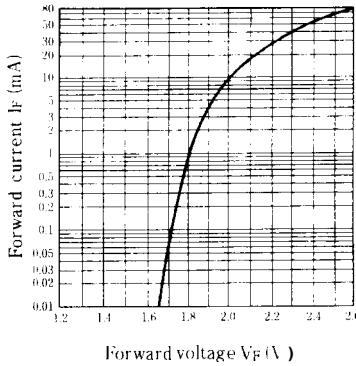
※4 Per dot

※5 Tolerance: +30%

■ Characteristics Diagrams

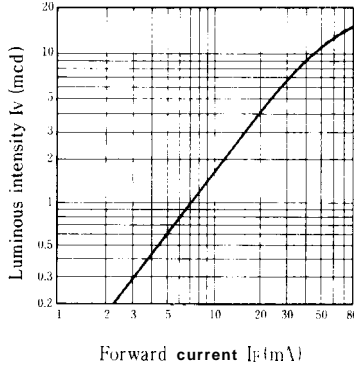
Forward Current vs. Forward Voltage

(T_a = 25°C)

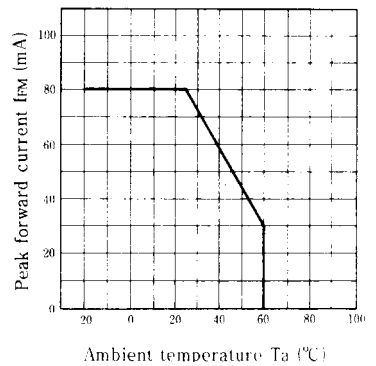


Luminous Intensity vs. Forward Current

(T_a = 25°C)

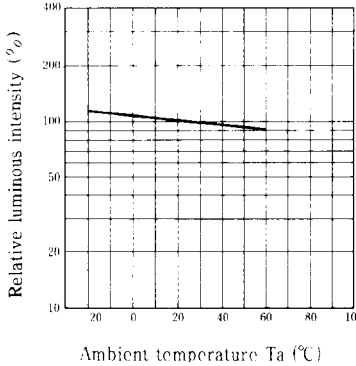


Peak Forward Current Derating Curve



Relative Luminous Intensity vs. Ambient Temperature

(I_F = 10mA)



Spectrum Distribution

(T_a = 25°C)

