

DATA SHEET

File No : LM-DS-1810 Page : 1

REV : A DATE : 2017-2-25

DATA SHEET

LTLM-R05AYCE-008

DATA SHEET

File No : LM-DS-1810 Page : 2

REV : A DATE : 2017-2-25

Part No:

LTLM-R05AYGE-008

Features

- * High intensity LED lamp
- * $\varnothing 5\text{mm}$ round shape
- * UV resistant epoxy

Applications

- * LED Screen
- * Illumination

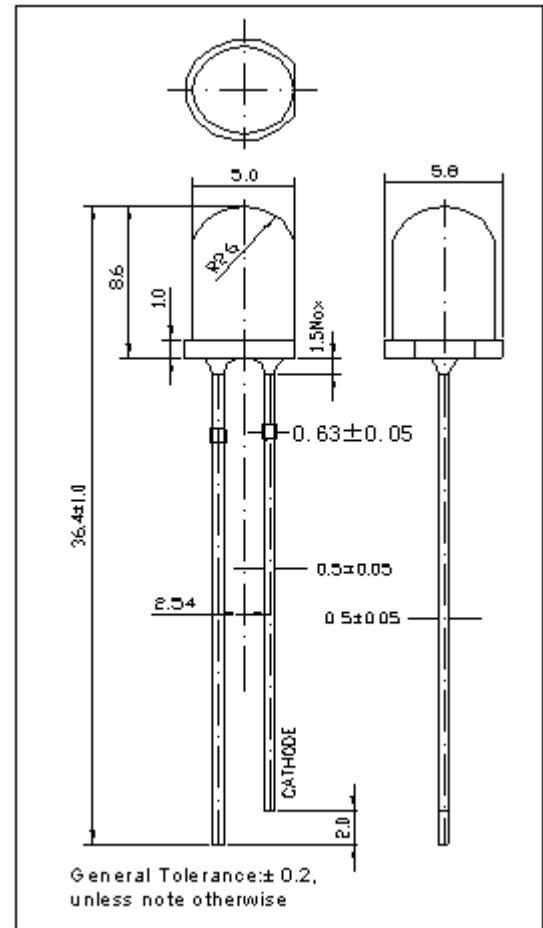
Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Max	Unit
Power Dissipation	P_D	125	mW
Peak Forward Current *	I_{FP}	100	mA
Continuous Forward Current	I_F	50	mA
Reverse Voltage	V_R	5	V
Operating Temperature Range	T_{opr}	-40°C to +95°C	
Storage Temperature Range	T_{stg}	-40°C to +100°C	
Lead Soldering Temperature Δ	T_{sol}	260	°C

* Duty ratio max 1/10 Pulse Width max. 0.1ms;

Δ At the position of 4mm from the bottom of the package within 5 seconds.

Package Dimensions



Unit : mm

Tolerance are ± 0.2 , unless note otherwise

Electrical Optical Characteristics

(Ta=25°C , @IF=20mA)

Part No.	Material	Lens	Emitting Color	Forward Voltage (v)		Luminous Intensity (mcd)		Dominant Wavelength (nm)		Viewing Angle ($2\theta_{1/2}$)
				Min	Max	Min	Max	Min	Max	
LM-R05AYGE-008	AlGaInP	Water Clear	Yellow	1.8	2.6	5500	12000	587	596	30°

DATA SHEET

File No : LM-DS-1810 Page : 3

REV : A DATE : 2017-2-25

BIN Table : (Test at 20mA)

VF (v)	
Color	Range
Yellow	1.8-2.6
0.2v 分档	

IV (mcd)	
Code	Range
25	5500-7200
26	7200-9300
27	9300-12000

Wd (nm)	
Code	Range
Y2	587-590
Y3	590-593
Y4	593-596

Error range :

Luminous Intensity (IV) $\pm 10\%$,

Forward Voltage (VF) ± 0.1 ,

X、Y Measuranc tolerance are ± 0.005 .

Caution in ESD :

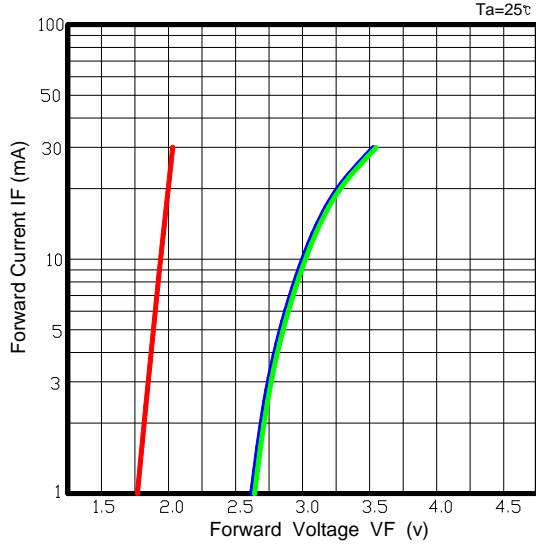
1. Static Electricity and surge damages the LEDs. It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs. All devices、Equipment and machinery must be properly grounded.
2. When inspecting own final products on which LEDs were mounted, It is easy to find static-damaged LEDs by light emission test at lower current (below 1mA is recommended) .
3. Damaged LEDs will show some unusual characteristics such as leak current remarkably increases, starting forward voltage becomes lower, or the LEDs get unlighted at the low current.

DATA SHEET

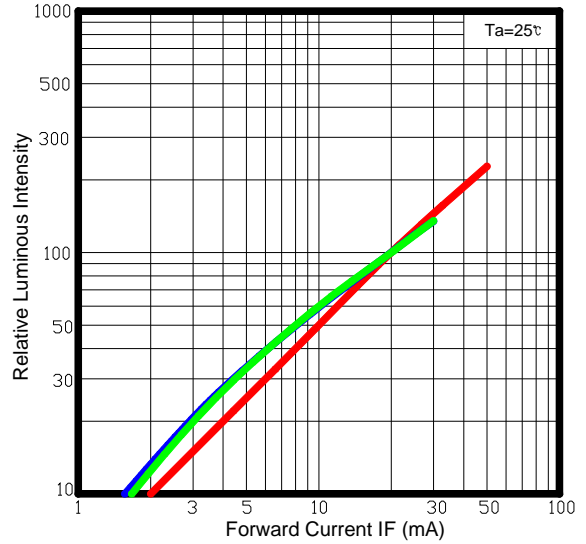
File No : LM-DS-1810 Page : 4

REV : A DATE : 2017-2-25

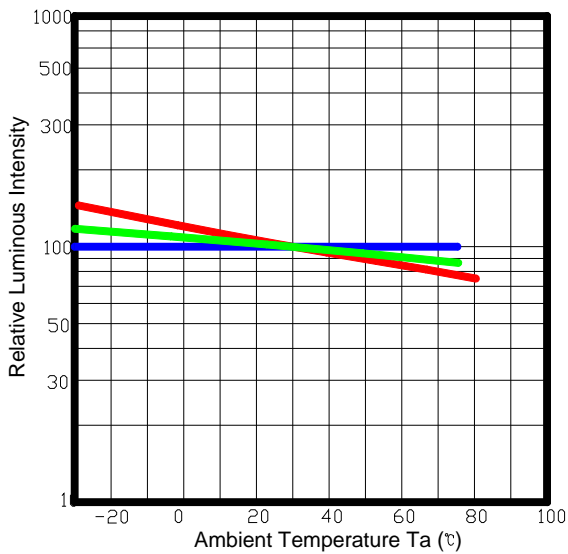
VF-IF



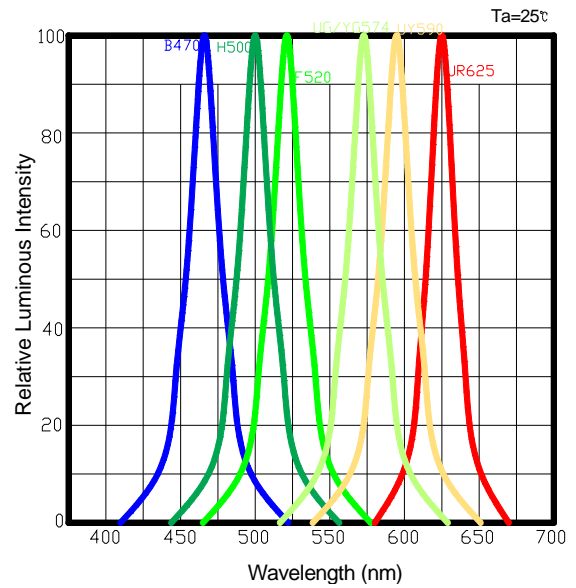
Relative Luminous Intensity-Ta



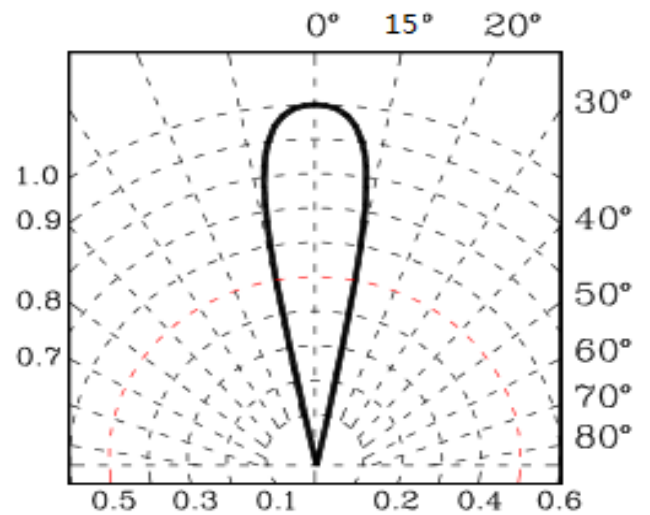
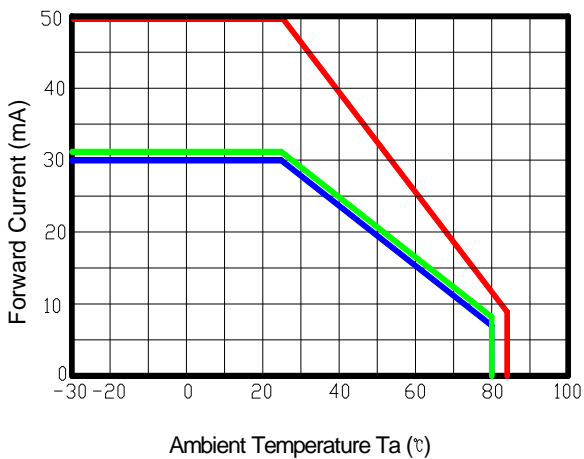
Relative Luminous Intensity-Ta



Wavelength Characteristics



IF-Ta



VIEW ANGLE

DATA SHEET

File No : LM-DS-1810 Page : 5

REV : A DATE : 2017-2-25

Reliability Test

Classification	Test Item	Test Conditions	Sample Size	Num of Damaged	Reference Standard
Endurance Test	Operating Life	$I_F=30mA$ 1000Hrs	22	0	MIL-STD-750:1026 MIL-STD-202:107D JIS C 7021:B-4
	High Temp. High Humidity Storage	$60\pm 5^\circ C$ $90\% \pm 5$ RH 500Hrs	100	0	MIL-STD-202:103D JIS C 7021:B-11
	Hi-Temp. Storage	$100\pm 5^\circ C$ 1000Hrs	100	0	MIL-STD-750:2031 MIL-STD-202:210A JIS C 7021:B-10
	Low-Temp. Storage	$-30\pm 5^\circ C$ 1000Hrs	100	0	JIS C 7021:B-12
Environmental Test	Temperature Cycling	$-30\pm 5^\circ C$ 30min Room Temp. 5min $100\pm 5^\circ C$ 30min 100 Cycles	100	0	MIL-STD-750:1051 MIL-STD-202:107D JIS C 7021:A-4
	Thermal Shock	$-30\pm 5^\circ C$ 5min $100\pm 5^\circ C$ 5min 100 Cycles	100	0	MIL-STD-750:1051 MIL-STD-202:107D JIS C 7021:A3
	Solderability	$230\pm 5^\circ C$ Dwell Time ≤ 5 sec	22	0	MIL-STD-202:208D MIL-STD-750:2026 MIL-STD-883:2003 JIS C 7021:A-2
	Solder Resistance	$260\pm 5^\circ C$ 10 ± 1 sec	22	0	MIL-STD-750:2031 MIL-STD-202:210A JIS C 7021:A-1

Criteria for Judging The Damage:

Item	Symbol	Test Conditions	Criteria for Judgment	
			Min	Max
Forward Voltage	V_F	$I_F=20mA$	—	U. S. L*1.1
Reverse Current	I_R	$V_R=5V$	—	U. S. L*2.0
Luminous Intensity	I_v	$I_F=20mA$	L. S. L*0.7	—

PS: U. S. L. :Upper Standard Level L. S. L. :Lower Standard Level

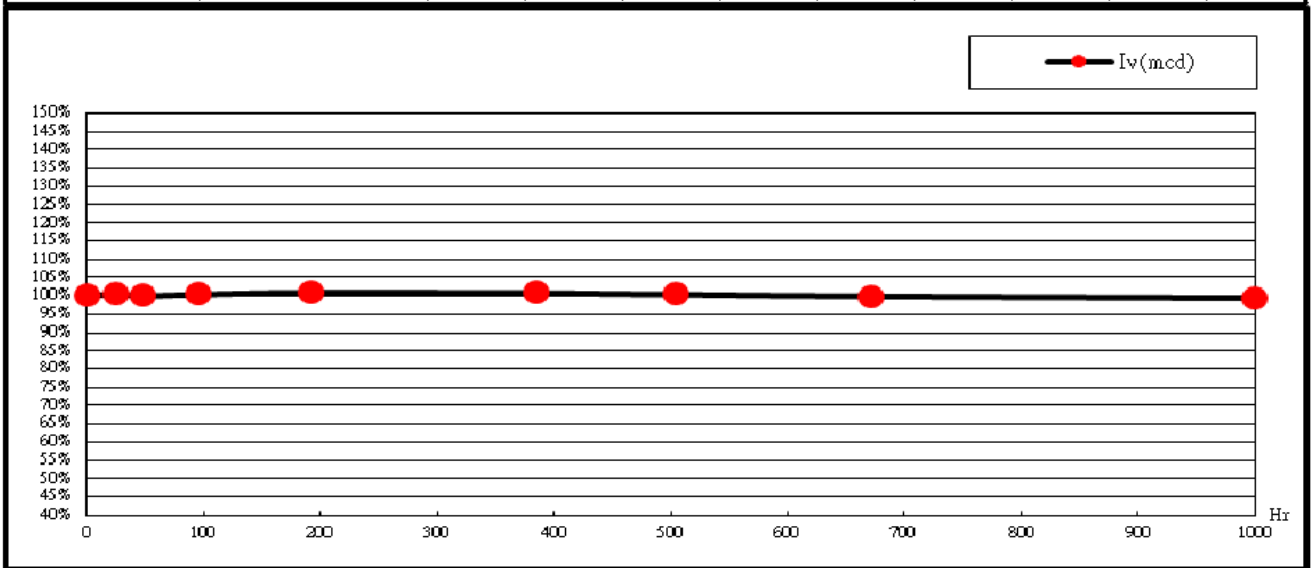
DATA SHEET

File No : LM-DS-1810 Page : 6

REV : A DATE : 2017-2-25

Life attenuation experiment:

Test Conditions	Room temperature/25°						Time	1000H	Current	20mA	
Project	Time(hr)	0	24	48	96	192	384	504	672	1000	
Iv(mcd)	Test value	7450	7486	7452	7479	7521	7510	7478	7442	7403	
	Attenuation (%)	100.0%	100.5%	100.0%	100.4%	101.0%	100.8%	100.4%	99.9%	99.4%	



Test Conditions	Room temperature/25°						Time	1000H	Current	14mA	
Project	Time(hr)	0	24	48	96	192	384	504	672	1000	
Iv(mcd)	Test value	5586	5640	5780	5746	5769	5798	5642	5614	5621	
	Attenuation (%)	100.0%	101.0%	103.5%	102.9%	103.3%	103.8%	101.0%	100.5%	100.6%	

