



LED Display

Product Data Sheet

LTG-Y2K19BM

Spec No.: DS30-2005-165

Effective Date: 08/11/2005

Revision: -

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

FEATURES

- * 0.2 inch (5.08 mm) DIGIT HEIGHT
- * CONTINUOUS UNIFORM SEGMENTS
- * LOW POWER REQUIREMENT
- * EXCELLENT CHARACTERS APPEARANCE
- * HIGH BRIGHTNESS & HIGH CONTRAST
- * WIDE VIEWING ANGLE
- * SOLID STATE RELIABILITY
- * **LEAD-FREE PACKAGE**

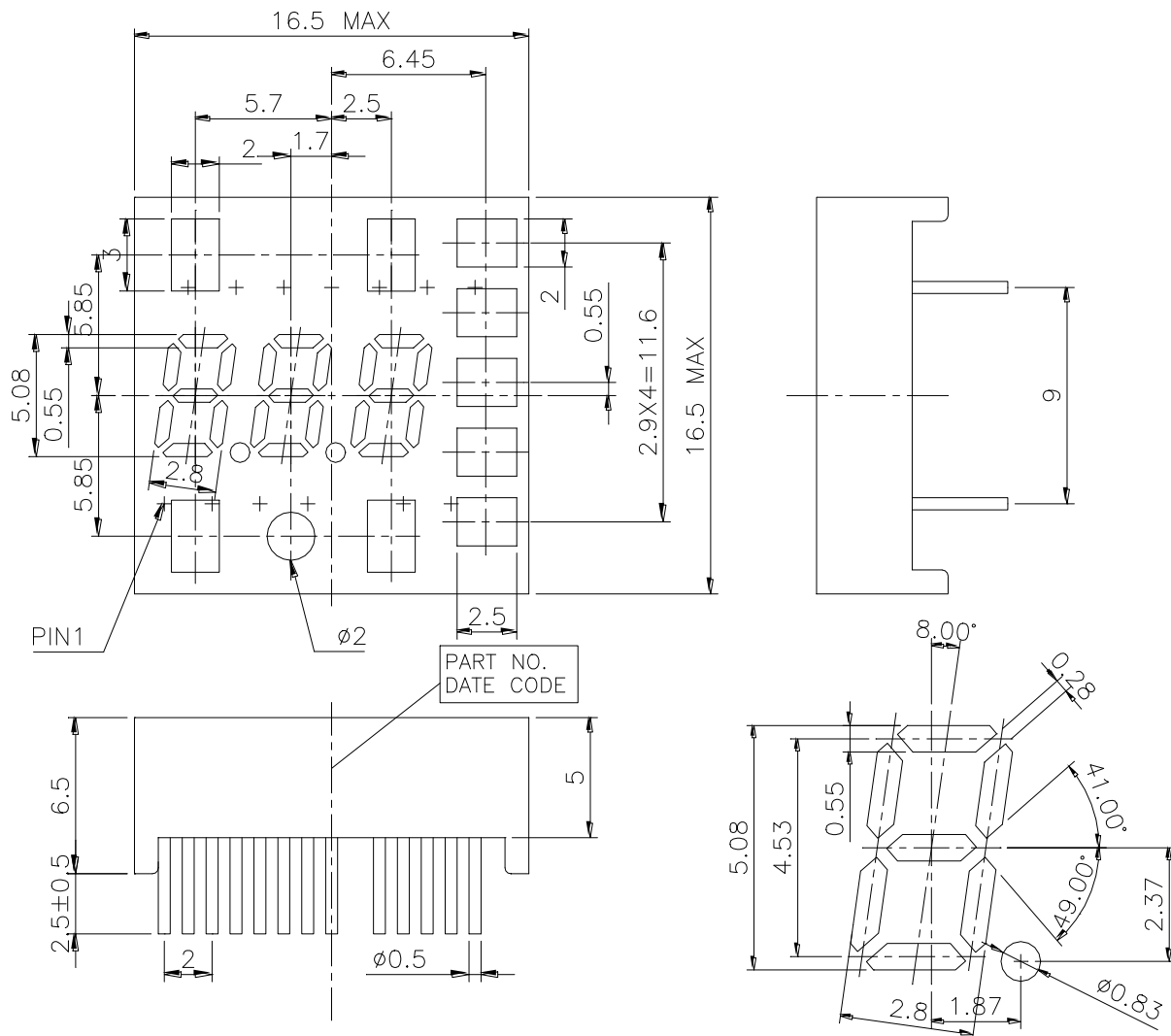
DESCRIPTION

The LTG-Y2K19BM is a 0.2 inch (5.08 mm) digit height seven segment display, with ten captions on it. The device uses AlInGaP Yellow LED chips (AlInGaP epi on GaAs substrate) and PURE GREEN LED chips (GaP epi on GaP substrate). This display has black face and white segments.

DEVICE

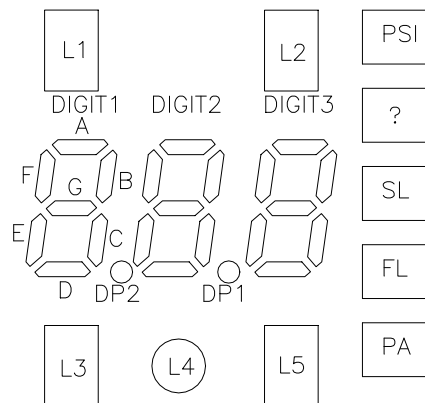
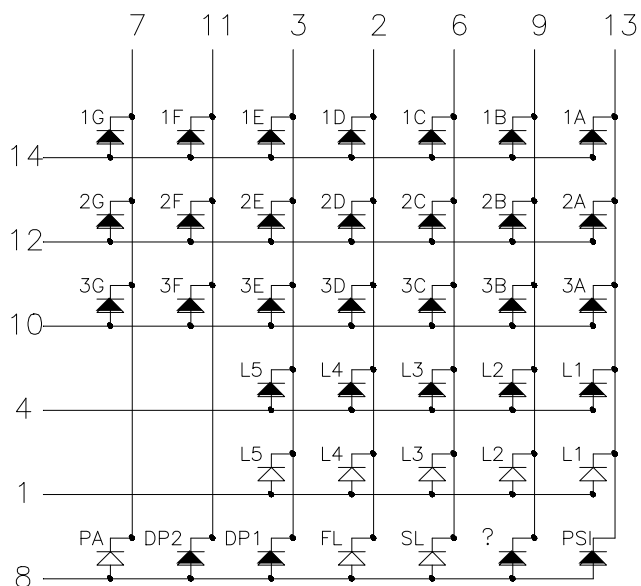
PART NO.	DESCRIPTION
MULTI-COLOR	Multiplex Common Anode
LTG-Y2K19BM	

PACKAGE DIMENSIONS



NOTES: All dimensions are in millimeters. Tolerances are ± 0.25 mm unless otherwise noted.

INTERNAL CIRCUIT IAGRAM



THE SIGN "  "

STANDARD FOR PURE GREEN CHIP.

THE SIGN "  "

STANDARD FOR AlInGaP YELLOW CHIP.

PIN CONNECTION

No.	CONNECTION
1	Common Anode (L1~L5)
2	Cathode (1D~3D , L4 , FL)
3	Cathode (1E~3E , L5 , DP1)
4	Common Anode (L1~L5)
5	No Connection
6	Cathode (1C~3C , L3 , SL)
7	Cathode (1G~3G, PA)
8	Common Anode (PA , DP1~2 , FL , SL , °C , PSI)
9	Cathode (1B~3B , L2 , °C)
10	Common Anode (3A~3G)
11	Cathode (1F~3F, DP2)
12	Common Anode (2A~2G)
13	Cathode (1A~3A , L1 , PSI)
14	Common Anode (1A~1G)

ABSOLUTE MAXIMUM RATING

PARAMETER	PURE GREEN	AllnGaP Yellow	UNIT
Power Dissipation Per Chip	75	70	mW
Peak Forward Current Per Chip (Frequency 1Khz, 10% duty cycle)	100*	60	mA
Continuous Forward Current Per Chip	25	25	mA
Derating Linear From 25°C Per Chip	0.28	0.28	mA/°C
Reverse Voltage Per Chip	5	5	V
Operating Temperature Range	-35°C to +105°C		
Storage Temperature Range	-35°C to +105°C		
Solder Temperature: max 260°C for max 3sec at 1.6mm below seating plane			

* see figure 5 to establish pulsed condition

ELECTRICAL / OPTICAL CHARACTERISTICS AT Ta=25°C
PURE GREEN (DIGIT)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity Per Segment	I _v	800	2000		μcd	I _F =10mA
Peak Emission Wavelength	λ _p		555		nm	I _F =20mA
Spectral Line Half-Width	Δλ		30		nm	I _F =20mA
Dominant Wavelength	λ _d		557		nm	I _F =20mA
Forward Voltage Per Chip	V _F		2.1	2.6	V	I _F =10mA
Reverse Current Per Chip	I _R			100	μA	V _R =5V
Luminous Intensity Matching Ratio (Similar Light Area)	I _{v-m}			2:1		I _F =10mA

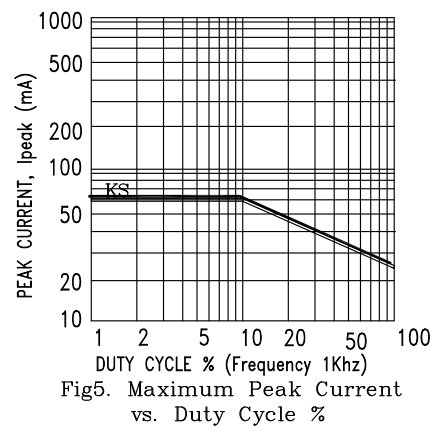
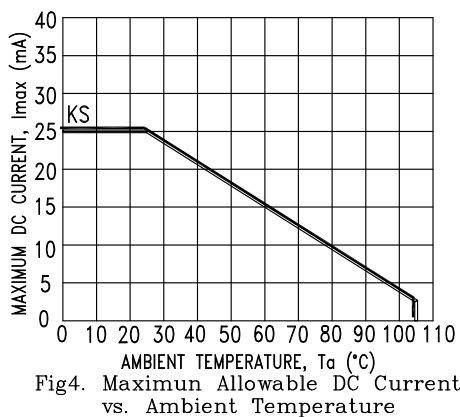
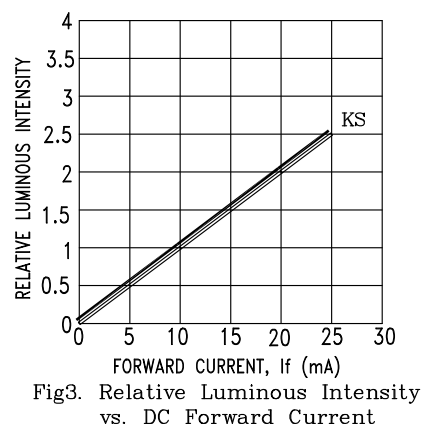
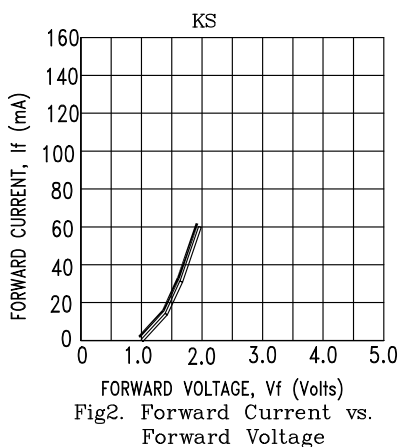
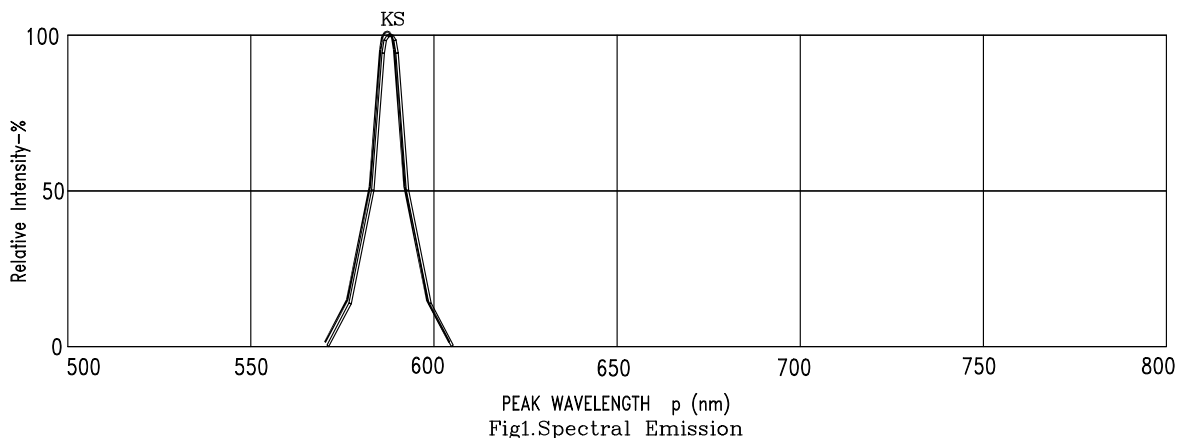
AllnGaP Yellow (ICON)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity Per Segment	I _v	500	1200		μcd	I _F =1mA
			15600			I _F =10mA
Peak Emission Wavelength	λ _p		588		nm	I _F =20mA
Spectral Line Half-Width	Δλ		15		nm	I _F =20mA
Dominant Wavelength	λ _d		587		nm	I _F =20mA
Forward Voltage Per Chip	V _F		2.05	2.6	V	I _F =20mA
Reverse Current Per Chip	I _R			100	μA	V _R =5V
Luminous Intensity Matching Ratio (Similar Light Area)	I _{v-m}			2:1		I _F =1mA

Note: Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (Commision Internationale De L'Eclairage) eye-response curve.

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

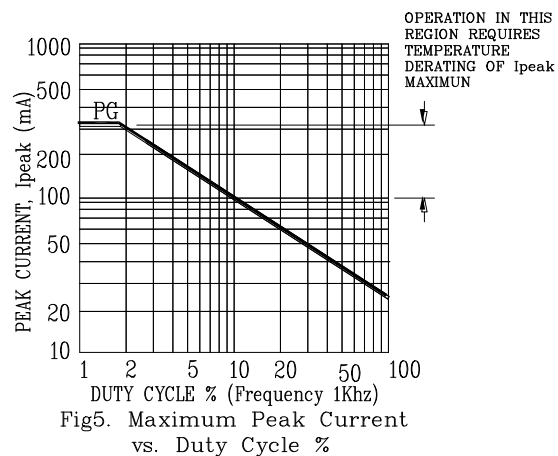
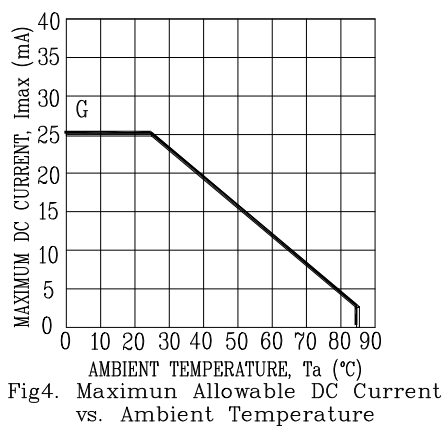
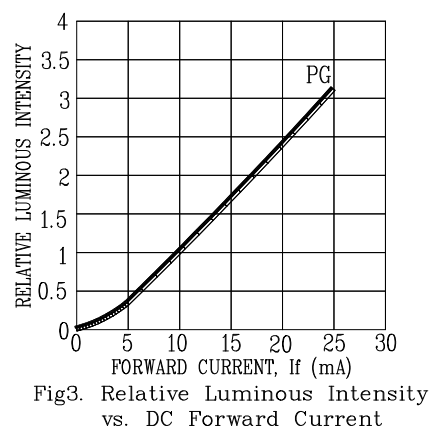
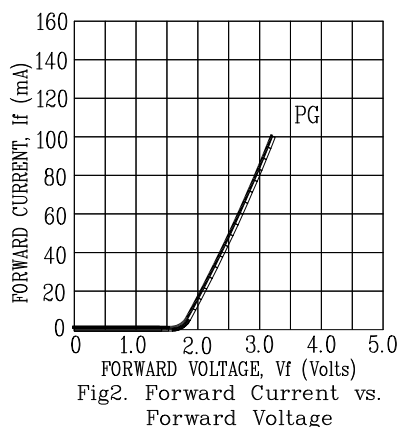
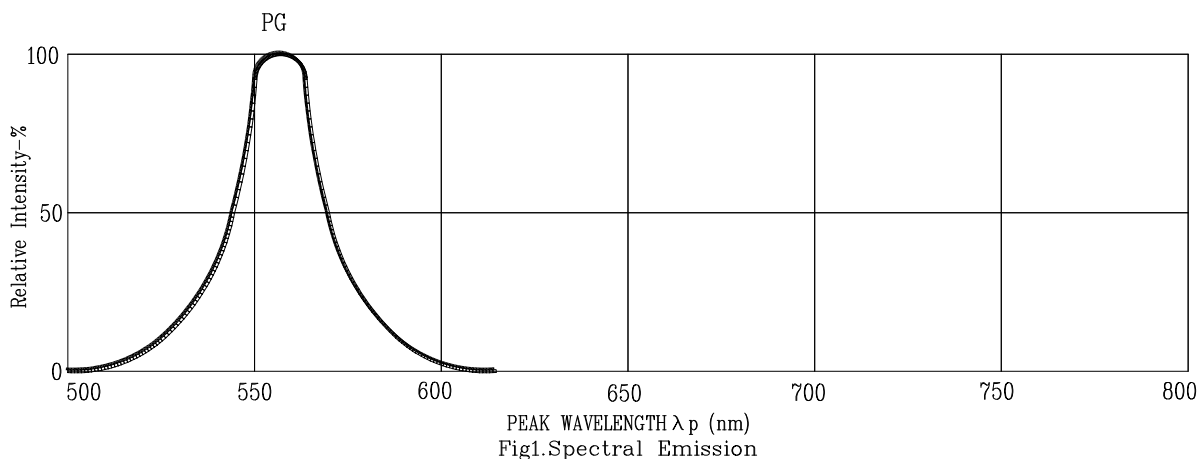
(25°C Ambient Temperature Unless Otherwise Noted)



NOTE : KS=AlInGaP YELLOW

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)



NOTE: PG=PURE GREEN