



LED Display

Product Data Sheet

LTP-14088KM-05

Spec No.: DS30-2004-065

Effective Date: 04/16/2004

Revision: -

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

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FEATURES

- * 1.46 inch (37.02 mm) MATRIX HEIGHT
- * LOW POWER REQUIREMENT
- * SINGLE PLANE, WIDE VIEWING ANGLE
- * SOLID STATE RELIABILITY
- * 8 ×8 ARRAY WITH X-Y SELECT
- * COMPATIBLE WITH USASCII AND EBCDIC CODES
- * STACKABLE HORIZONTALLY
- * CATEGORIZED FOR LUMINOUS INTENSITY

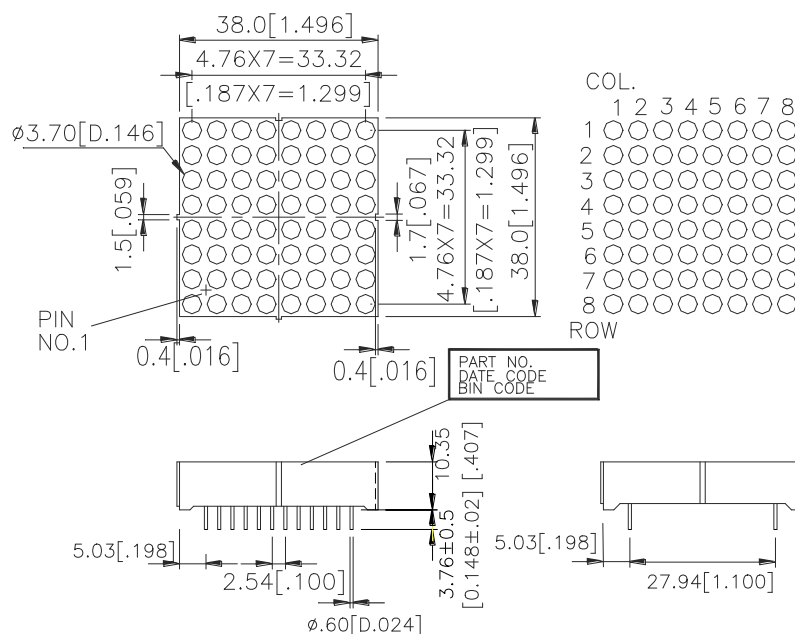
DESCRIPTION

The LTP-14088KM-05 is a 1.46 inch (37.02 mm) matrix height 8 ×8 dot matrix display. This device uses AS-AlInGaP HYPER RED LED chips (AlInGaP epi on GaAs substrate), GREEN LED chips (AlInGaP epi on GaAs substrate). The matrix display has a black face and white dot color.

DEVICE

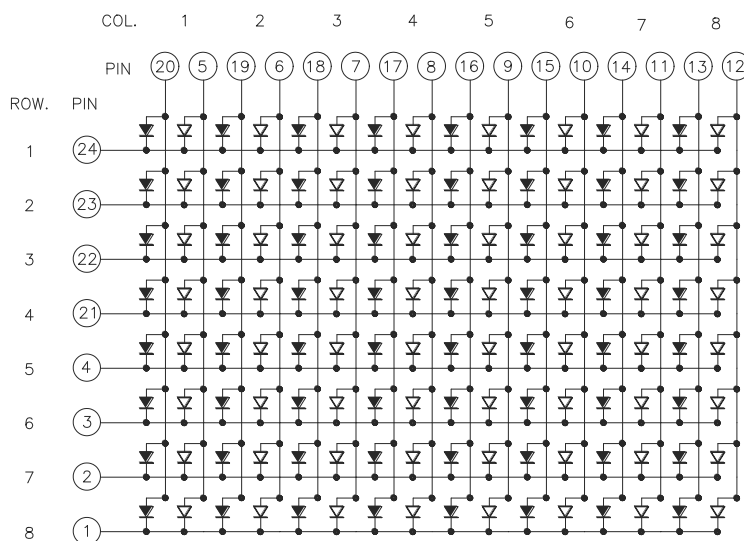
PART NO.	DESCRIPTION
GREEN & HYPER RED	Anode Column
LTP-14088KM-05	Cathode Row

PACKAGE DIMENSIONS



NOTES: All dimensions are in millimeters. Tolerances are ± 0.25 mm (0.01") unless otherwise noted.

INTERNAL CIRCUIT DIAGRAM



The sign "  " stands for RED ORANGE color chips.

The sign "  " stands for GREEN color chips.

PIN CONNECTION

NO	CONNECTION	NO	CONNECTION
1	CATHODE ROW 8	13	ANODE COLUMN 8 RED ORANGE
2	CATHODE ROW 7	14	ANODE COLUMN 7 RED ORANGE
3	CATHODE ROW 6	15	ANODE COLUMN 6 RED ORANGE
4	CATHODE ROW 5	16	ANODE COLUMN 5 RED ORANGE
5	ANODE COLUMN 1 GREEN	17	ANODE COLUMN 4 RED ORANGE
6	ANODE COLUMN 2 GREEN	18	ANODE COLUMN 3 RED ORANGE
7	ANODE COLUMN 3 GREEN	19	ANODE COLUMN 2 RED ORANGE
8	ANODE COLUMN 4 GREEN	20	ANODE COLUMN 1 RED ORANGE
9	ANODE COLUMN 5 GREEN	21	CATHODE ROW 4
10	ANODE COLUMN 6 GREEN	22	CATHODE ROW 3
11	ANODE COLUMN 7 GREEN	23	CATHODE ROW 2
12	ANODE COLUMN 8 GREEN	24	CATHODE ROW 1

ABSOLUTE MAXIMUM RATING

GREEN

PARAMETER	MAXIMUM RATING	UNIT
Average Power Dissipation Per Dot	35	mW
Peak Forward Current Per Dot (Frequency 1Khz,25% duty cycle)	60	mA
Average Forward Current Per Dot	13	mA
Derating Linear From 25°C Per Dot	0.17	mA/°C
Reverse Voltage Per Dot	5	V
Operating Temperature Range	-35°C to +85°C	
Storage Temperature Range	-35°C to +85°C	
Soldering Conditions : 1/16 inch below seating plane for 3 seconds at 260 ⁰ C		

ELECTRICAL / OPTICAL CHARACTERISTICS AT Ta=25°C

GREEN

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I _V	4000	9937		μcd	I _p =80mA 1/16Duty
Peak Emission Wavelength	λ _p		571		nm	I _F =20mA
Spectral Line Half-Width	Δλ		15		nm	I _F =20mA
Dominant Wavelength	λ _d		572		nm	I _F =20mA
Forward Voltage any Dot	V _F		2.05	2.6	V	I _F =20mA
			2.3	2.8		I _F =80mA
Reverse Current any Dot	I _R			100	μA	V _R =5V
Luminous Intensity Matching Ratio	I _v -m			2:1		I _p =80mA 1/16Duty

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

ABSOLUTE MAXIMUM RATING**HYPER RED**

PARAMETER	MAXIMUM RATING	UNIT
Average Power Dissipation Per Dot	40	mW
Peak Forward Current Per Dot (Frequency 1Khz,18% duty cycle)	90	mA
Average Forward Current Per Dot	15	mA
Derating Linear From 25°C Per Dot	0.2	mA/°C
Reverse Voltage Per Segment	5	V
Operating Temperature Range	-35°C to +85°C	
Storage Temperature Range	-35°C to +85°C	
Soldering Conditions : 1/16 inch below seating plane for 3 seconds at 260°C		

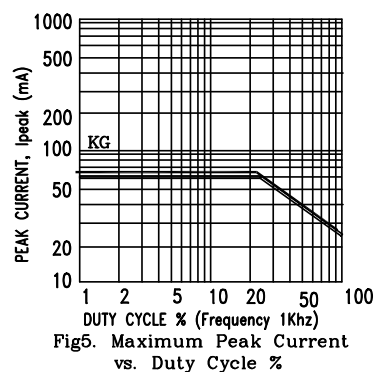
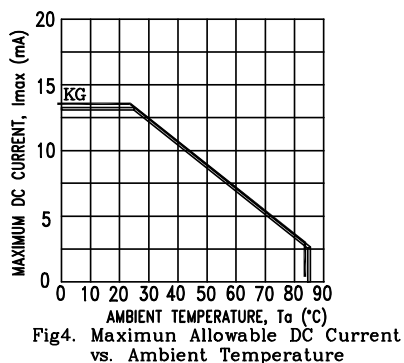
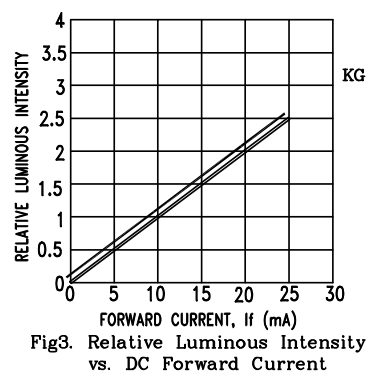
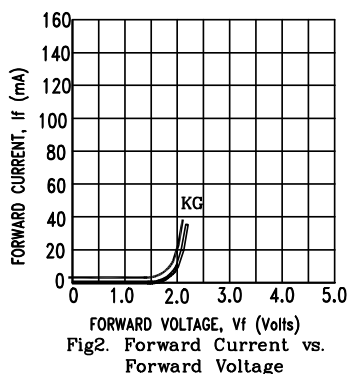
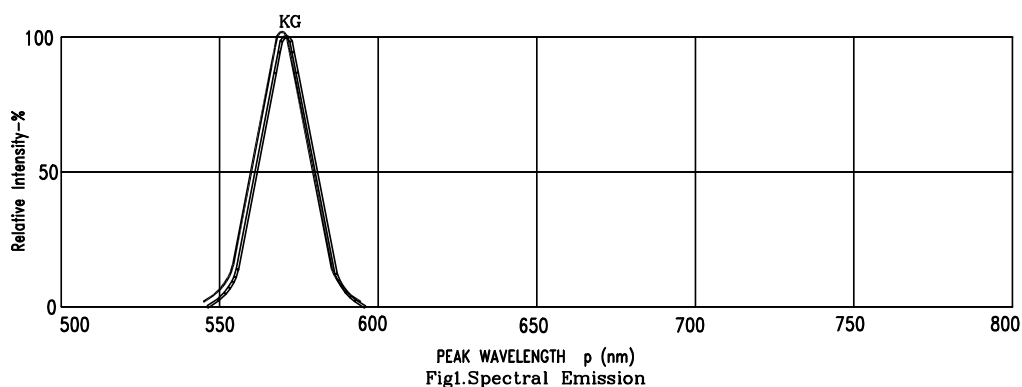
ELECTRICAL / OPTICAL CHARACTERISTICS AT Ta=25°C**HYPER RED**

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I _v	1500	3218		μcd	I _p =80mA 1/16Duty
Peak Emission Wavelength	λ _p		650		nm	I _F =20mA
Spectral Line Half-Width	Δλ		20		nm	I _F =20mA
Dominant Wavelength	λ _d		639		nm	I _F =20mA
Forward Voltage any Dot	V _F		2.1	2.6	V	I _F =20mA
			2.3	2.8		I _F =80mA
Reverse Current any Dot	I _R			100	μA	V _R =5V
Luminous Intensity Matching Ratio	I _v -m			2:1		I _p =80mA 1/16Duty

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

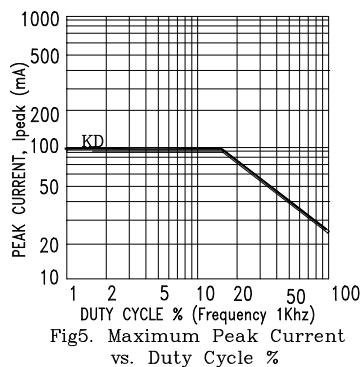
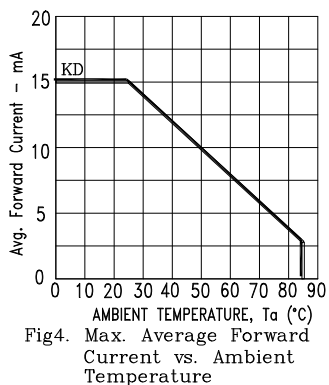
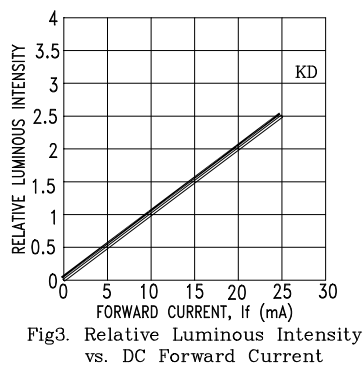
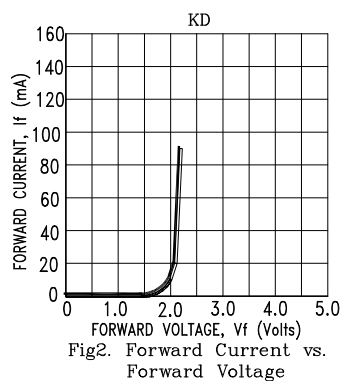
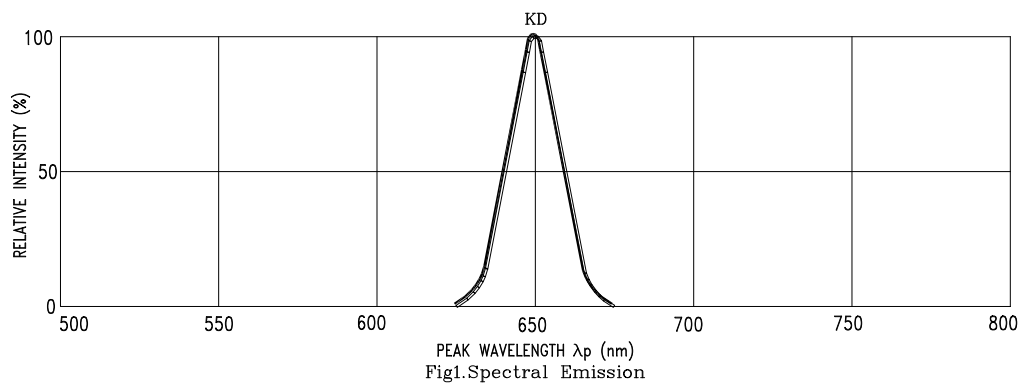
(25°C Ambient Temperature Unless Otherwise Noted)



NOTE : KG=AlInGaP Green

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)



NOTE : KD=AlInGaP HYPER RED