

FEATURES

- * 1.85 inch (47.0 mm) MATRIX HEIGHT
- * LOW POWER REQUIREMENT
- * SINGLE PLANE, WIDE VIEWING ANGLE
- * SOLID STATE RELIABILITY
- * 8x8 ARRAY WITH X-Y SELECT.
- * COMPATIBLE WITH USASCII AND EBCDIC CODES
- * STACKABLE HORIZONTALLY
- * CATEGORIZED FOR LUMINOUS INTENSITY

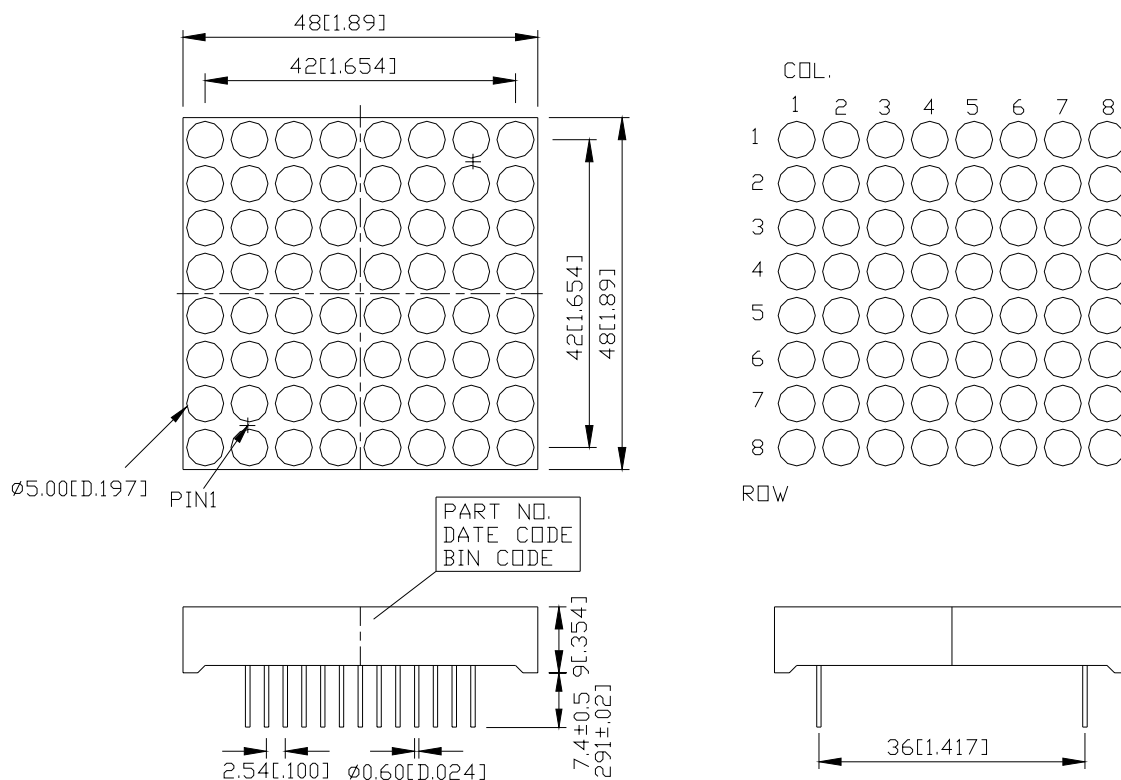
DESCRIPTION

The LTP-18188KM-01 is a 1.85 inch (47.0 mm) matrix height 8x8 dot matrix displays. This device uses AS-AlInGaP HYPER RED LED chips (AlInGaP epi on GaAs substrate) and AS-AlInGaP GREEN LED chips (AlInGaP epi on GaAs substrate). The display has black face white dots.

DEVICE

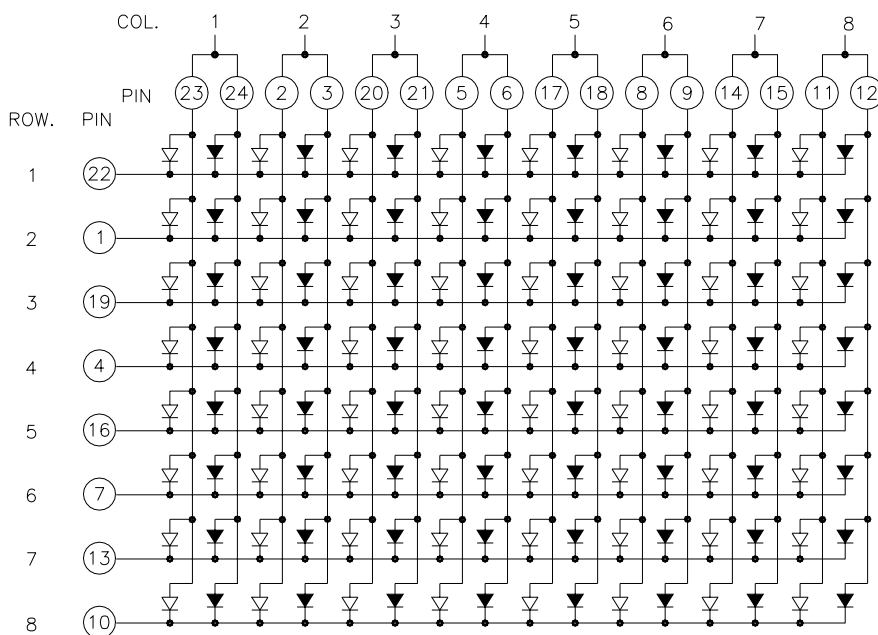
PART NO.	DESCRIPTION
AlInGaP HYPER RED & AlInGaP GREEN	Anode Column
LTP-18188KM-01	Cathode Row

PACKAGE DIMENSIONS



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

INTERNAL CIRCUIT DIAGRAM



THE SIGN " $\rightarrow$ " STANDARD FOR AlInGaP GREEN CHIPS.
THE SIGN " $\rightarrow$ " STANDARD FOR AlInGaP HYPER RED CHIPS.

PIN CONNECTION

NO	CONNECTION	NO	CONNECTION
1	Cathode Row 2	13	Cathode Row 7
2	Anode Column 2 AlInGaP GREEN	14	Anode Column 7 AlInGaP GREEN
3	Anode Column 2 AlInGaP HYPER RED	15	Anode Column 7 AlInGaP HYPER RED
4	Cathode Row 4	16	Cathode Row 5
5	Anode Column 4 AlInGaP GREEN	17	Anode Column 5 AlInGaP GREEN
6	Anode Column 4 AlInGaP HYPER RED	18	Anode Column 5 AlInGaP HYPER RED
7	Cathode Row 6	19	Cathode Row 3
8	Anode Column 6 AlInGaP GREEN	20	Anode Column 3 AlInGaP GREEN
9	Anode Column 6 AlInGaP HYPER RED	21	Anode Column 3 AlInGaP HYPER RED
10	Cathode Row 8	22	Cathode Row 1
11	Anode Column 8 AlInGaP GREEN	23	Anode Column 1 AlInGaP GREEN
12	Anode Column 8 AlInGaP HYPER RED	24	Anode Column 1 AlInGaP HYPER RED

ABSOLUTE MAXIMUM RATING

PARAMETER	AlInGaP GREEN	UNIT
Average Power Dissipation Per Dot	35	mW
Peak Forward Current Per Dot	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	
Solder Temperature: max 260°C for max 3sec at 1.6mm[1/16inch] below seating plane.		

ELECTRICAL / OPTICAL CHARACTERISTICS AT Ta=25°C
AlInGaP GREEN

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I _v	1370	3600		μcd	I _p =30mA 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 =30mA 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

PARAMETER	AllnGaP HYPER RED	UNIT
Average Power Dissipation Per Dot	40	mW
Peak Forward Current Per Dot	90	mA
Average Forward Current Per Dot	15	mA
Derating Linear From 25°C Per Dot	0.2	mA/°C
Reverse Voltage Per Dot	5	V
Operating Temperature Range	-35°C to +85°C	
Storage Temperature Range	-35°C to +85°C	
Solder Temperature: max 260°C for max 3sec at 1.6mm[1/16inch] below seating plane.		

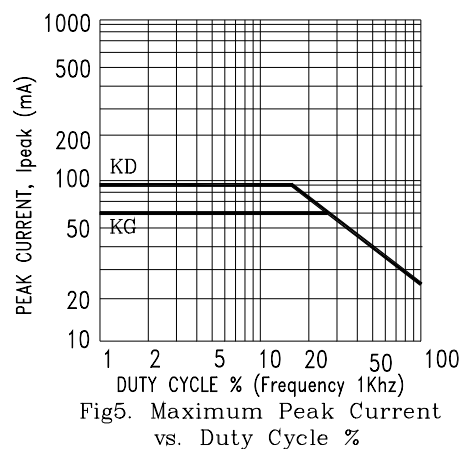
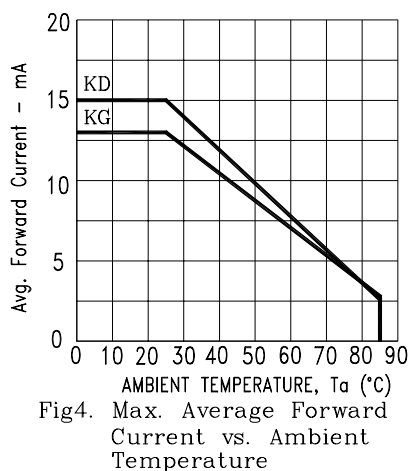
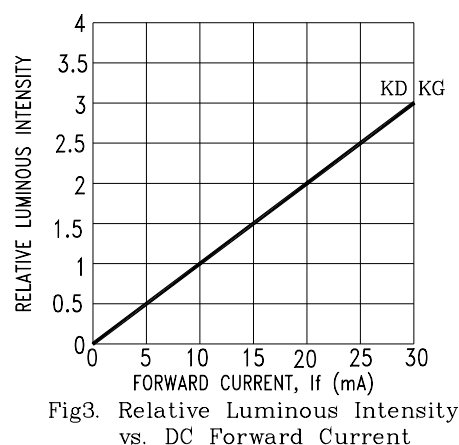
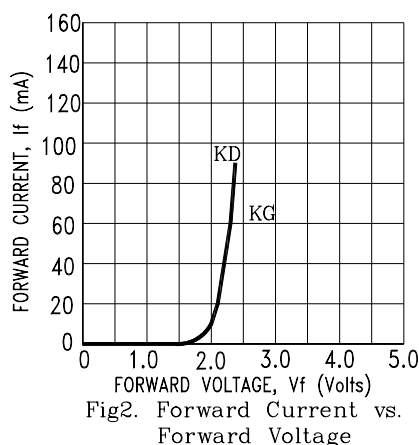
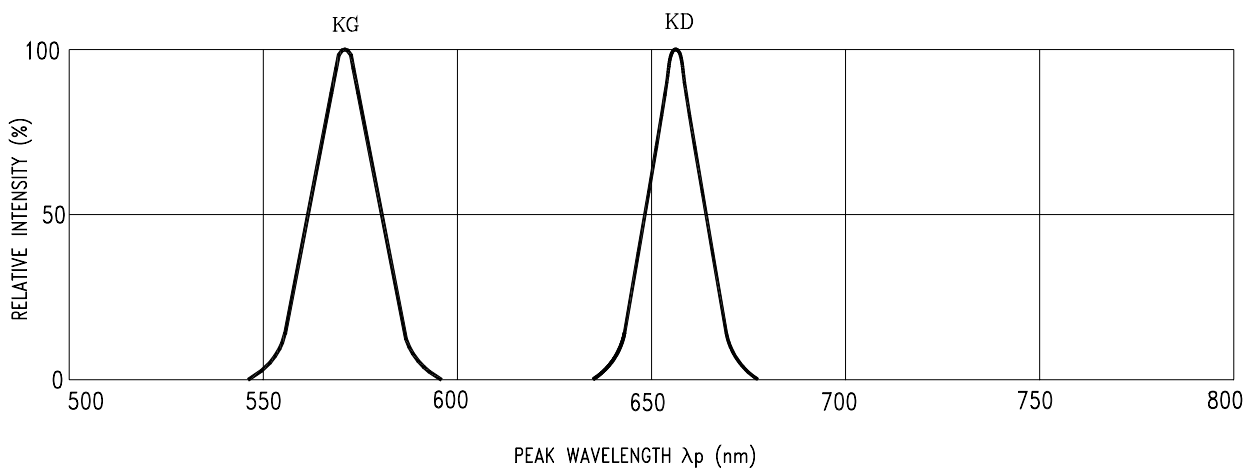
ELECTRICAL / OPTICAL CHARACTERISTICS AT Ta=25°C
AllnGaP HYPER RED

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I _v	1650	3500		μcd	I _p =32mA 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 =32mA 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 : KD=AlInGaP HYPER RED
KG=AlInGaP GREEN