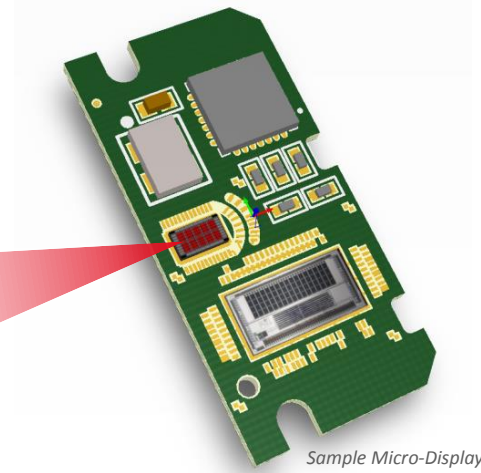


# Micro-Display

A high performance monolithic LED chip that displays data clearly and brightly exactly when it's needed



**Micro-Display uses PRP's monolithic array technology to provide clear, bright and easy to integrate LED displays**

Micro-Display has been designed with gun sights, scopes and range-finders in mind.

Placing Micro-Display in the optical path enables scrollable menus and icons to be viewed within the eyepiece.

Each individually addressable red LED pixel within the micro array is 70 microns wide with a pixel to pixel pitch of 100 microns.

Micro-Display uses an industry standard driver which makes it faster, cheaper and easier to integrate within your product line.

Using our design and development experience PRP can package Micro-Display into a single, cost effective chip customised to meet your requirements.

## Features

- 100Hz display refresh rate
- 1000:1 brightness control
- Individually addressable pixels
- Built-in character generation
- Industry standard I<sup>2</sup>C interface

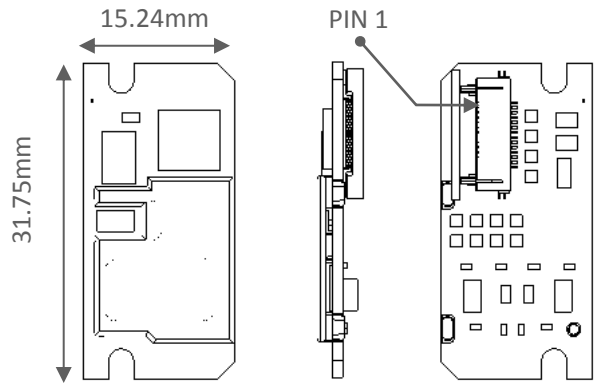
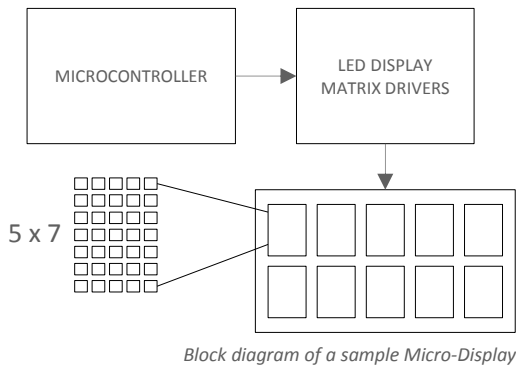
## Micro-Display Benefits

- Scrollable menus and icon display
- Illuminated reticle selection
- Easy localisation of products for territory

## Commitment to Quality

PRP's Quality Management System is approved to ISO 9001:2008 with UKAS accreditation.

# Technical Specifications



## Optical Characteristics

Parameter	Symbol	Min	Typ	Max	Units
Peak Wavelength	$\lambda_d$	645	655	665	nm
Pixel Luminous Intensity (Max)	$I_{v(max)}$	-	300	-	$\mu\text{cd}$
Matching Ratio (Pixel to Pixel) – High Peak Current	$MR_{HI}$	-	-	1.2	-
Matching Ratio (Pixel to Pixel) - Low Peak Current	$MR_{LO}$	-	-	1.5	-

All optical characteristics are specified at 25°C ambient temperature

## Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Units
Logic supply voltage	$V_{DD}$	-0.5	6.0	V
Display supply voltage	$V_{DISP}$	-0.5	6.0	V
Signals output voltage	$V_{O(MAX)}$	-0.3	$V_{DD} + 0.3$	V
Signals input voltage	$V_{I(MAX)}$	-0.3	$V_{DD} + 0.3$	V

## Recommended Operating Conditions

Parameter	Symbol	Min	Max	Units
Logic supply voltage	$V_{DD}$	5.0	5.2	V
Display supply voltage	$V_{DISP}$	5.0	5.2	V
Signal input voltage	$V_I$	0	$V_{DD}$	V

## Pin-Out Details

Pin	Symbol	I/O	Function
1	VDISP	PWR	+5V LED power supply input.
2	VDISP	PWR	+5V LED power supply input.
3	LEDGND	PWR	LED power supply return to 0V.
4	LEDGND	PWR	LED power supply return to 0V.
5	TEST1	-	Do not connect.
6	TEST2	-	Do not connect.
7	TEST3	-	Do not connect.
8	SCL	IN	I <sup>2</sup> C interface clock input.
9	SDA	I/O	I <sup>2</sup> C interface data input/output.
10	TEST4	-	Do not connect.
11	TEST5	-	Do not connect.
12	TEST6	-	Do not connect.
13	GND	PWR	Logic power supply return to 0V.
14	VDD	PWR	+5V logic power supply input.