ENFIS UNO Plus Array RGBA

Rich RGBA spot-source colour/CCT changing with 36 high-power LED's in just 1cm^2

Features & Benefits

- **Intense, high-power RGBA spot source**
- **Superior colour-mixing via dense packaging and interleaving of colours**
- **Addition of the Amber channel improves the richness of colour-mix over conventional RGB technology**
- **Enables active monitoring of light output via embedded smart array technology**
- **Long-life and reliable, high-performance due to excellent thermal conductivity**
- **Simple integration via connectorized PCB with mounting holes**

Outline Specification

- **Typical power:**
  - **R: 250 Lumens**
  - **G: 350 Lumens**
  - **B: 100 Lumens**
  - **A: 270 Lumens**
- **>1000 Lumens (all channels on)**
- **1.15cm^2 Aperture**
- **Input Power: 50W**
- **Typical thermal resistance <0.8°C/W**

Light Engine Integration

Enfis can eliminate the time, cost and risk of integration by offering our arrays as part of a complete light engine solution

Smart Array Technology

Light output from the Enfis arrays can be monitored and controlled via patent-pending integrated photo-detection system, enabling precise control of light output.

Thermal Management

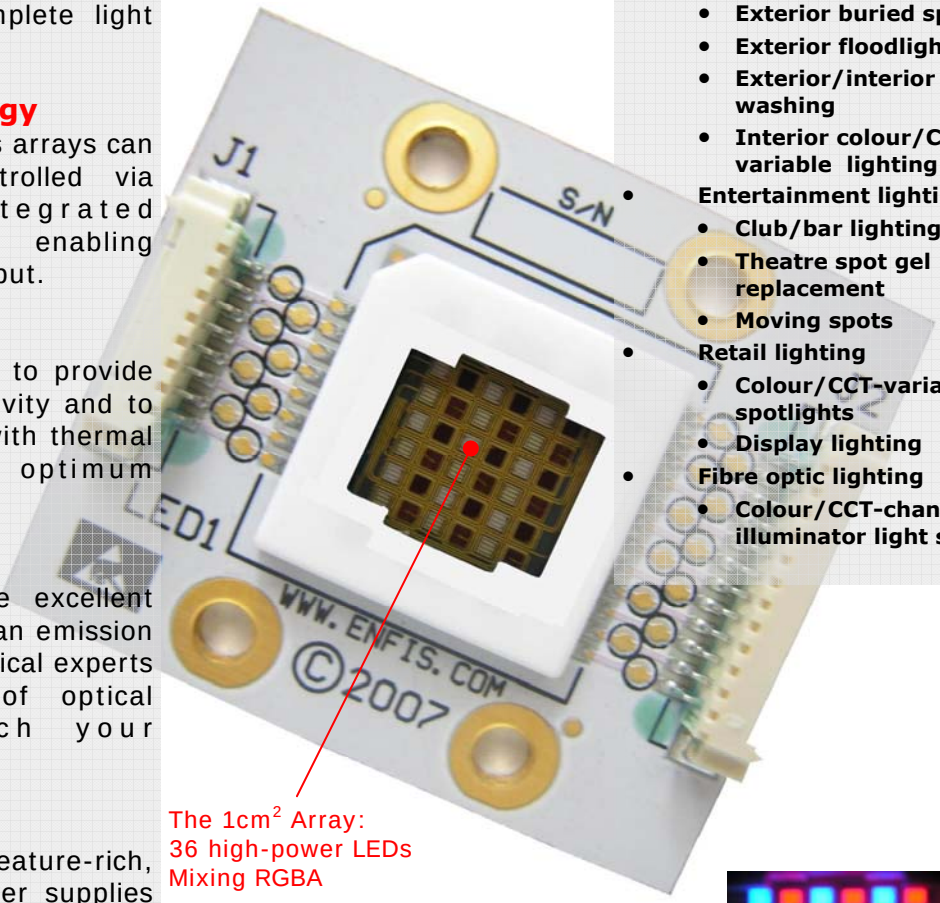
Enfis arrays are designed to provide excellent thermal conductivity and to be integrated effectively with thermal hardware to ensure optimum performance and life

Optics

Enfis Uno arrays provide excellent spot source with Lambertian emission characteristics. Enfis technical experts can advise a range of optical solutions to match your requirements.

Power Management

Enfis provides a range of feature-rich, powerful drivers and power supplies for our arrays. Our applications team can provide you with a solution for your specific requirements.



The 1cm^2 Array:
36 high-power LEDs
Mixing RGBA

Applications & Markets

- **Architectural lighting**
  - **Exterior buried spotlights**
  - **Exterior floodlights**
  - **Exterior/interior wall-washing**
  - **Interior colour/CCT-variable lighting**
- **Entertainment lighting**
  - **Club/bar lighting**
  - **Theatre spot gel replacement**
  - **Moving spots**
- **Retail lighting**
  - **Colour/CCT-variable spotlights**
  - **Display lighting**
- **Fibre optic lighting**
  - **Colour/CCT-changing illuminator light sources**

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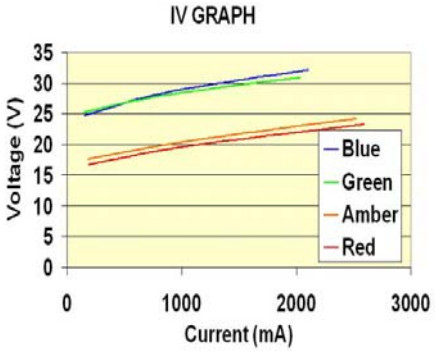
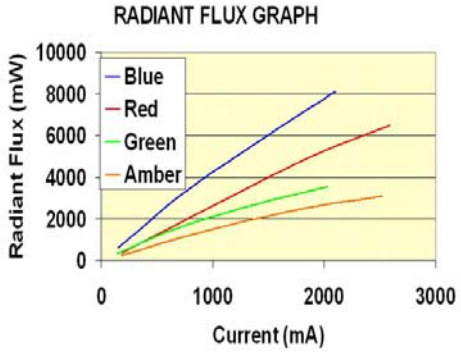
Technical Specification

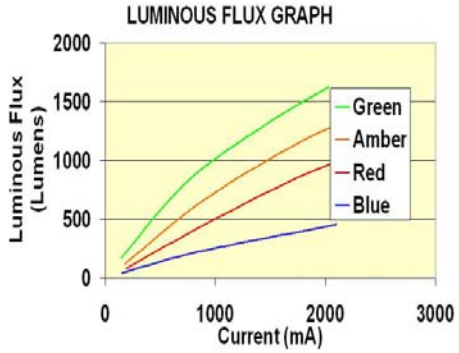
Electro-Optical Characteristics

Channel	Red			Green			Blue			Amber		
Item	**Min**	**Typ**	**Max**	**Min**	**Typ**	**Max**	**Min**	**Typ**	**Max**	**Min**	**Typ**	**Max**
Rated Current If (mA)		500			440			388			550	
Forward Voltage Vf (Volts)	20	25	30	24	28	32	28	32	36	19	23	27
Peak Wavelength λp (nm)	620	630	640	510	520	530	450	465	470	590	595	605
Dominant Wavelength λd (nm)	610	620	630	518	528	538	455	470	475	587	592	603
Spectral Width Δλ (nm)	12	16	20	32	37	42	15	23	30	10	15	20
Total Radiant Flux ΦR (mW)	1100	1350		750	850		1500	1800		450	570	
Radiant Flux Density ΦR/A (mW/cm²)	957	1174		652	739		1304	1565		391	496	
Total Luminous Flux ΦL (Lumens)	200	250		300	350		80	100		200	270	
Luminous Flux Density ΦL/A (lm/cm²)	174	217		260	304		70	87		174	235	
Total Electrical Power P (W)		12.5			12.5			12.5			12.5	

All measurements performed at a heatsink temperature of 25°C and each Channel is capable of up to 20W for increased light output







Heat Generation

Proper thermal design of the end product is of paramount importance. The operational junction temperature of each LED chip should be kept below 125°C.
Please contact Enfis for further support in this matter.

Handling LED Array

Contact with the encapsulation on the surface of the LED array must be avoided to prevent damage.
Do not apply pressure to the encapsulation or allow it to come into contact with sharp objects.
During operation the encapsulation will be hot and contact should be avoided

Static Electricity

Care must be taken when handling, these products are sensitive to static electricity .
Observe static handling precautions.

Cleaning

Avoid touching the LED array surface.
To clean—BLOW surface with either dry air or nitrogen gas

Eye Safety Precautions

The light output of the products may cause injuries to human eyes in circumstances where the products are viewed directly with unshielded eyes for more than a few seconds.

Please refer to IEC 60825-1:2001 for further information

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