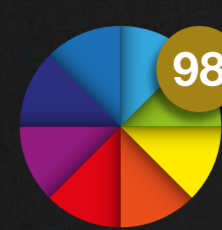


Professional LED Module

CRI98

HIGHER REFLECTANCE OF COLOUR



ProART98
Ra~98

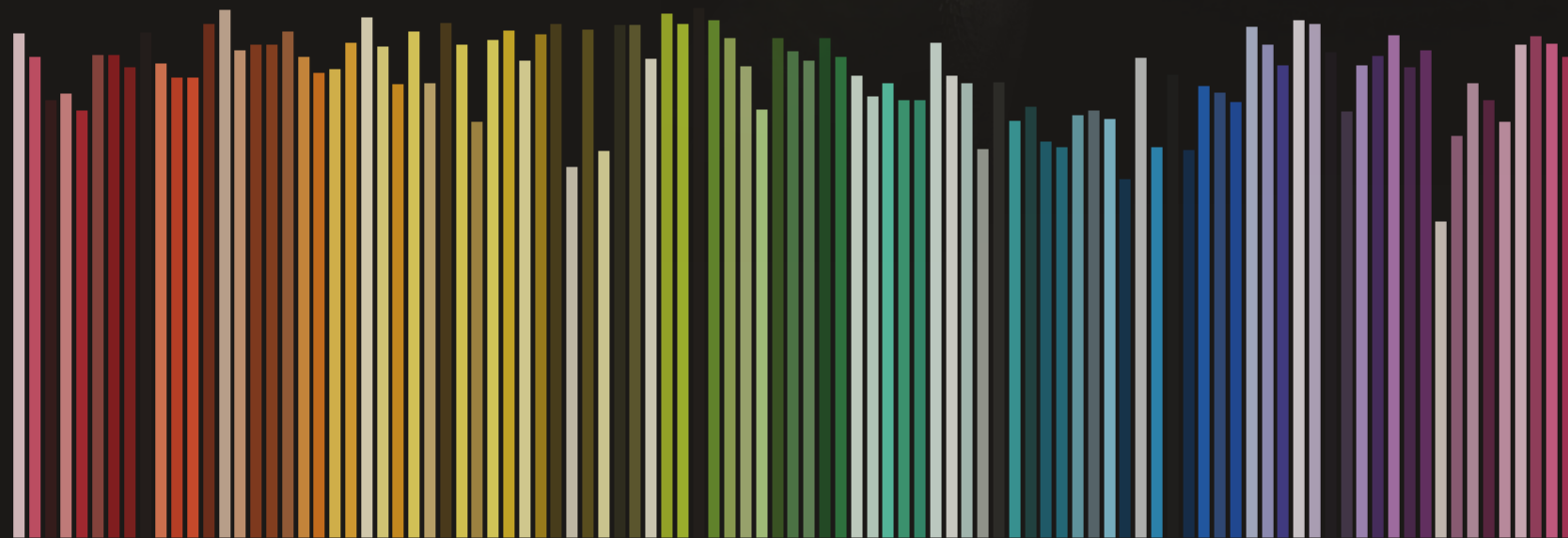
Single CCT LED modules in ProART98 produce light closely matched to natural sunlight that illuminate objects to show its true reflection colours, with high Colour Rendering Index of Ra~98 (R9~98), Colour Fidelity Index of Rf~93 and Gamut Index of Rg~99.

Single CCT LED modules in ProART98



With the right selection of light colour temperature, the colour of illuminated objects will appear identical under natural daylight, perfect for showcasing applications such as retail or exhibits.

Apart from using Colour Rendering Index (CRI) to evaluate colour rendition, colour fidelity and gamut are derived from IES TM-30 that shows the mix of hue shift and saturation shift in a more comprehensive manner. By comparing colour samples rendered by a given light source and a reference light source of the same correlated colour temperature, a wealth of data on the colour rendering performance of the given light source is obtained.

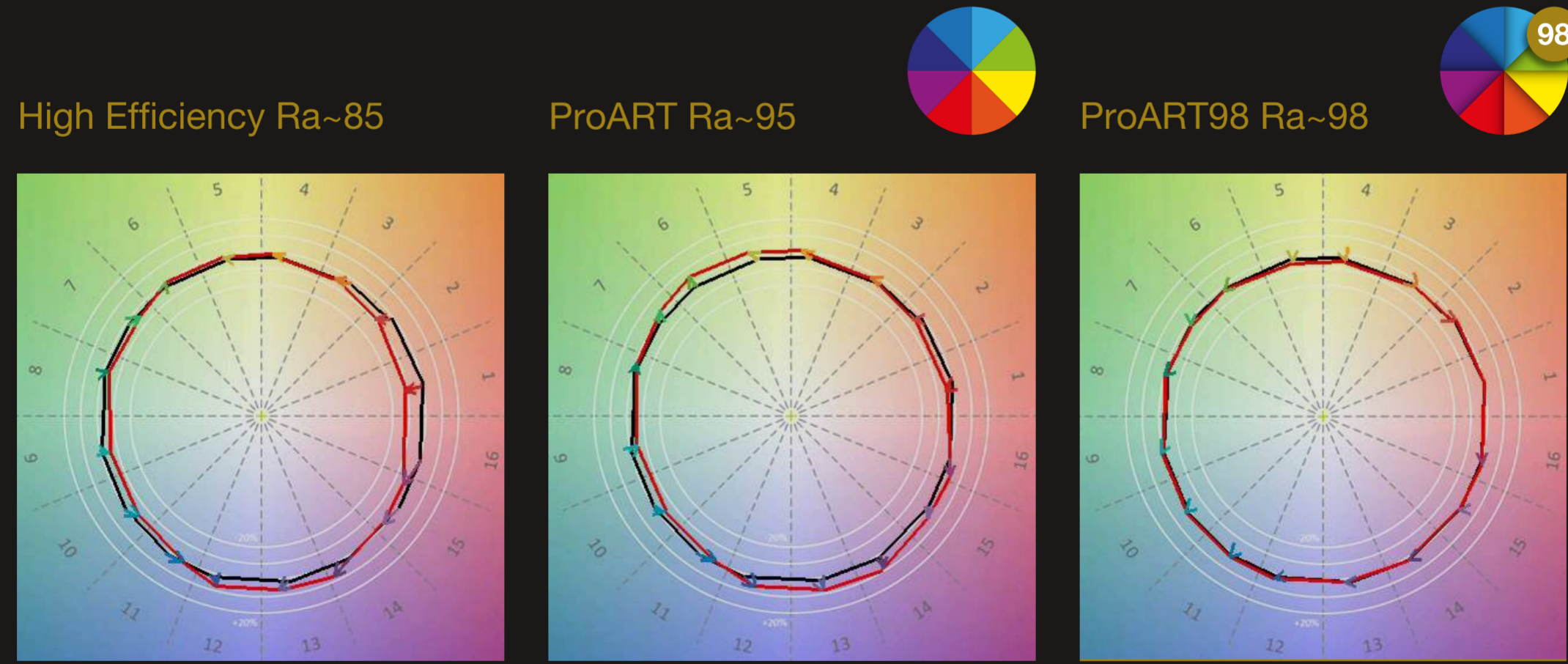


TM-30 uses the rendition of 99 colour samples for comparison

Colour Fidelity Index (Rf) refers to the accuracy of colour rendition so that they appear as they would under a reference light source. 99 colour evaluation samples are used for comparison while CRI only evaluates the comparison of 9 colours.

Gamut Index (Rg) refers to the average level of colour saturation relative to a reference light source, using the same 99 colour evaluation samples for comparison. An Rg value of 100 indicates that there is no change in saturation on average, while values below 100 indicates that the rendered colours are less saturated on average and values above 100 means that the rendered colours are more saturated on average.

A Colour Vector Graphic is used to illustrate the colour rendition performance of a given light source. Below is a comparison between high efficiency Ra~85, ProART and ProART98 LED modules in 3000K, which shows the superb colour rendering performance of ProART98 LED modules whereby colours are rendered with very minimal distortion.



Black circle indicates the authentic colours rendered by the reference light source. Red circle and arrows indicate how colours are distorted by the given light source.

CRI	Ra~85, R9>0	CRI	Ra~95, R9>50	CRI	Ra~98, R9>98
TM-30-15 Rf	~86.5	TM-30-15 Rf	~89.2	TM-30-15 Rf	~97.2
TM-30-15 Rg	~96.1	TM-30-15 Rg	~102.7	TM-30-15 Rg	~99.7
Lower content of red light in colour spectrum compared to higher CRI LED modules.		Higher content of red light in colour spectrum compared to standard Ra~85.		Lower content of blue light in colour spectrum compared to others.	
λ_p nm	603	λ_p nm	629	λ_p nm	639
$\lambda_p V$ mW/m ²	21.39	$\lambda_p V$ mW/m ²	58.48	$\lambda_p V$ mW/m ²	64.23



Advanced Thermal Protection System



Low Flicker, No Risk (IEEE 1789)



Durability
Long lifetime of more than 50,000 hours L80 lamp life



Converging Optical Lens Maximising LOR

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