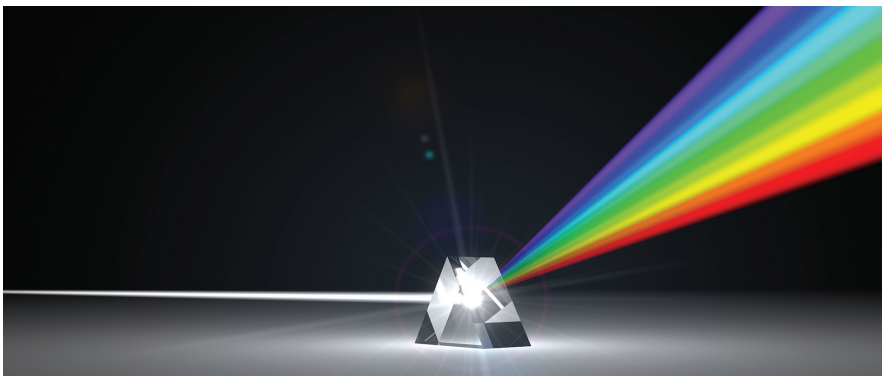
Blue-Rich White Light and LED Myths

In recent times there has been a barrage of media articles and internet blogs asserting that LED lighting may cause detrimental effects in humans, animals and on the night sky. The broad implication is that LED lighting and blue-rich white light is a negative force that is undermining the delivery of healthy outcomes.



There is much misinformation and many out-of-context assumptions in circulation. Some commentaries are based on the premise that LED white light is damaging and is to be avoided, but little regard is paid to the very many desirable and positive attributes of well-designed LED white light applications. In NZ, overseas case studies and research reports are often cited, but without expert advice to meaningfully interpret for local technical standards and conditions there is much opportunity to misinterpret and to draw wrong conclusions.

Simplistic before-and-after comparisons of legacy vs LED lumens are misleading as they don't take into account the combined beneficial effects of astute lighting design, NZ's low standardised light levels, upward light shielding, better luminaire optical control, and off-peak dimming and switching, all of which have positive impacts on environmental and health outcomes.

Blue-rich white light is not a new phenomenon. The spectral characteristics of legacy white light sources such as compact fluorescent, linear fluorescent, mercury vapour and metal halide are similar to those of white LED.

Well-designed LED lighting schemes can deliver virtually any required light colour and spectrum that the market desires and values. Almost all newly supplied lighting schemes in NZ are now LED and there is a huge range of lighting performance options available that deliver major financial, energy and environmental benefits to owners and users.

For indoor residential lighting there are many warm white 2700K and 3000K LED options both as retro-fit replacement lamps (bulbs) and as luminaires (light fittings). Homeowners in NZ are well served for advice and supply by specialist lighting retailers and DIY outlets.

For outdoor commercial and public space lighting AS/NZS lighting design standards play a pivotal role in defining safe and fit-for-purpose lighting outcomes, and AS/NZS light levels are much lower than those used in the US, EU, UK. Also, consumer preferences for warmer colour temperatures is seeing more NZ councils selecting 3000K options. The NZ lighting industry is fully in accord with such choices and can economically provide effective solutions.

In terms of balanced societal outcomes, LED is the solution, not the problem.

As solution providers, Lighting Council New Zealand members strongly acknowledge the need for sound environmental and social stewardship and strive to innovate to provide ever improving options for the NZ lighting market.

LCNZ is the industry association for lighting manufacturing, importing and distributing companies in New Zealand.

www.lightingcouncil.org.nz

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