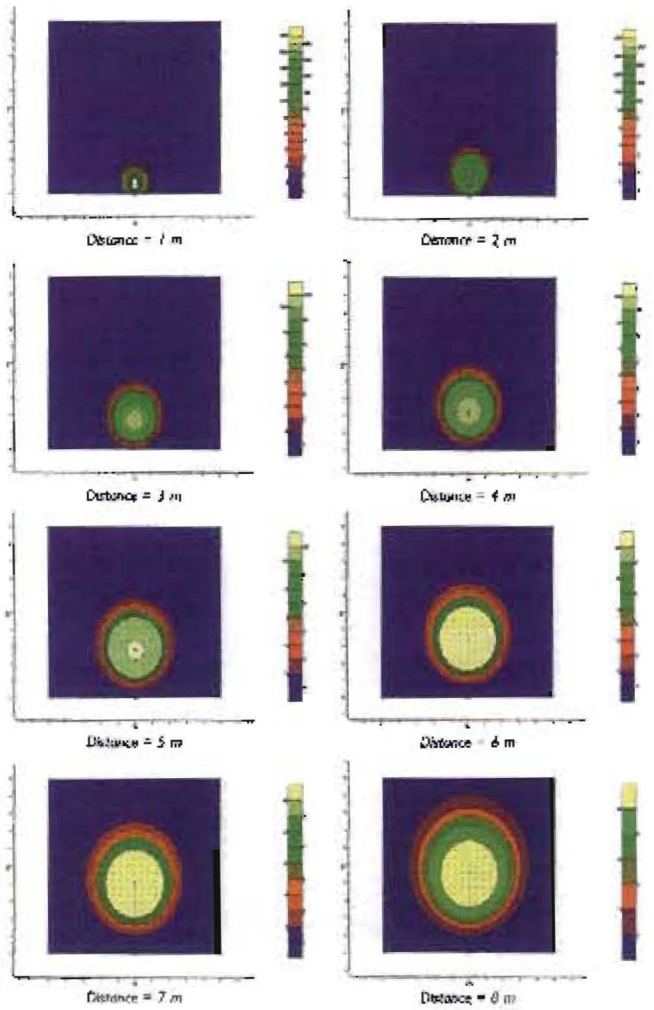
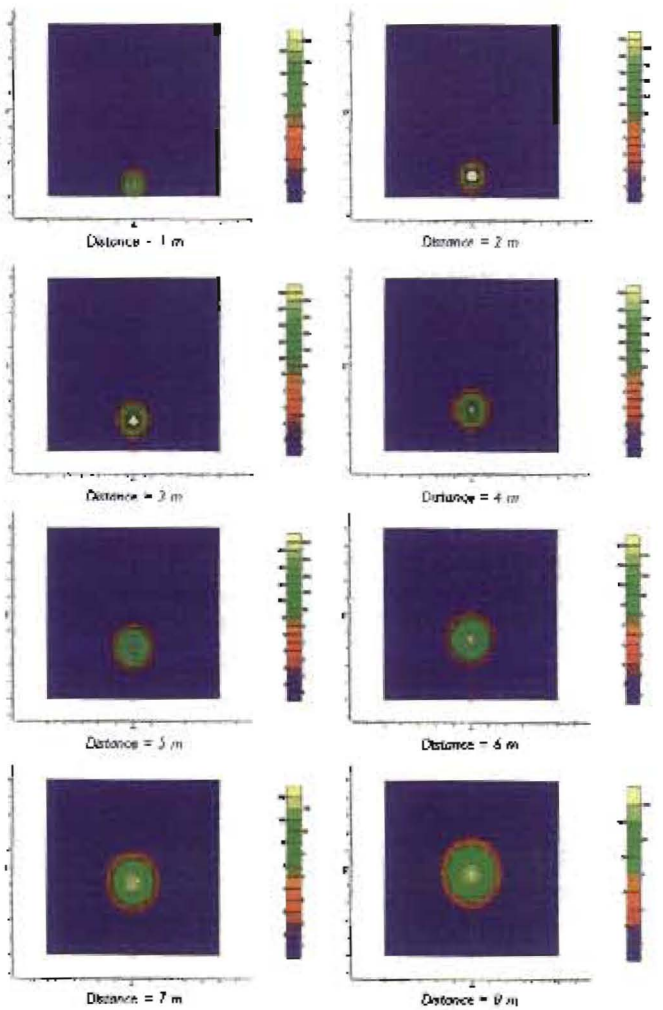
Survey of lighting effects medium beam

Figure 8



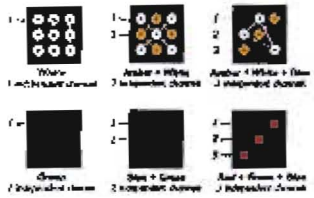
Survey of lighting effects narrow beam

Figure 9



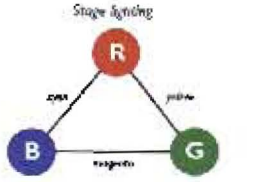
Color mixing

Figure 10



LEDflood is available in mono-color, bi-color and tri-color versions. The mono-color versions are White, Amber, Red, Green and Blue, the bi-color versions are Cyan and Amber, and the tri-color versions are RGB and AWB. The possible solutions are static but can also be dynamic when used with a lighting control system. Two modes of color mixing are possible with LEDflood: RGB and AWB.

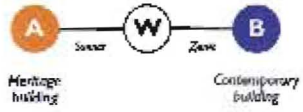
Figure 11



Our eyes see what different surfaces reflect when colored light falls on them. This depends upon the reflective property and the texture of the surface. The same wall or surface may look completely different when looked at under different colored light. In the same way, two surfaces which look different under natural daylight may look very similar when looked at under strong monochromatic light.

In RGB color mixing it is possible to obtain the primary colors from the intrinsic monochromatic light sources and the complementary colors by using bi-color mixing. We can also obtain pastel shades by mixing white with colored light. Both bi-color and tri-color mixing may be used to obtain smooth dynamic lighting effects. Dimming can be used in mono-color, bi-color and tri-color mixing to obtain dynamic effects.

Figure 12



In AWB color mixing it is possible to vary the color temperature of the basic white source by either adding amber or blue to it. However, it is interesting to note that by mixing blue and amber we get lavender.

The figure below shows an example of RGB color mixing. Mono-color mixing shows only each primary color. Bi-color mixing shows the primary and the secondary colors. Tri-color mixing shows all the colors and completes the entire picture.



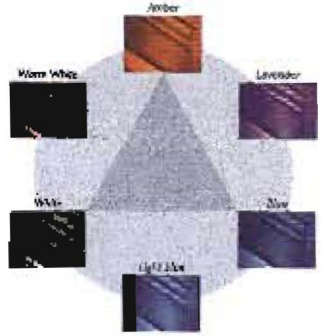
Coed Llandoer - Esbot UK - Lighting Designer: D Pocovitch

In the figures below, we see the effects of AWB and RGB color mixing on two different surfaces - a white wall and a textured metallic building material. Both the primary and the secondary colors are shown.

AWB color mixing on a white wall



AWB color mixing on a metallic structure



RGB color mixing on a white wall



RGB color mixing on a metallic structure



A separate guide on colors and materials is being published and readers may wish to refer to this for more detailed information on this subject.



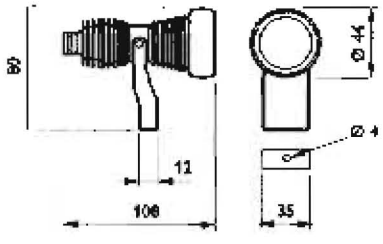
Underwater LED K2, illumination in water

Underwater LED is a compact, innovative spot and recessed solution designed to create amazing effects in wet or water environments. Fully IP68 to a depth of 10 m, it offers a choice of beams – 10°, 25° and 40° – for precision illumination of, for example, fountains or ponds.

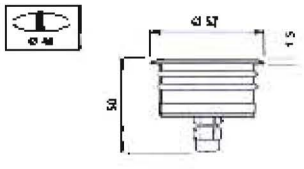
Underwater LED is available in blue, white and RGB versions; other colours are available upon request.



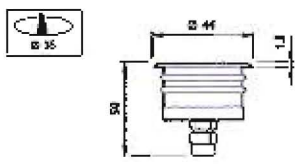
	Underwater LED surface mounted K2	Underwater LED recessed K2
		 
Type	BCB451, surface mounted	BBB451, recessed
Light source	BCB451: 3 x LUXEON® K2	1 x LUXEON® K2 or 3 x LUXEON® K2
Light colour	Mono: blue, cool white RGB	Mono: blue, cool white RGB
Optic	10°, 25° and 40°	0°, 25° and 40°
Power supply	Current driven, 700 mA	Current driven, 700 mA
Consumption	BCB451: 3 x LUXEON® K2: max 12 W	BBB451: 1 x LUXEON® K2: max 4WBBB451: 3 x LUXEON® K2: max 12 W
Controls (optional)	RGB: ColourChaser DMX ColourChaser Wheel with slave interface	RGB: ColourChaser DMX ColourChaser Wheel with slave interface
Operating temperature	-20°C < Ta < 35°C	-20°C < Ta < 35°C
Classification	IK08, IP68, Class III	IK08, IP68, Class III
Lifetime	50 000 hrs (70% lumen maintenance)	50 000 hrs (70% lumen maintenance)
Materials	Housing: Machined brass, anodised aluminium Bracket: stainless steel	Housing: Machined brass, anodised aluminium Bracket: stainless steel
Installation	No preference in orientation Underwater (IP68)	No preference in orientation Underwater (IP68)



Product shown: BCB45 3 x LED
All dimensions in mm



Product shown: BBB451 3 x LED
All dimensions in mm



Product shown: BBB451 1 x LED
All dimensions in mm