



Iternz Dual: A recessed solar-powered internally illuminated pavement marker

A solar powered, internally illuminated bi-directional, recessed road marker that delineates lane lines more clearly at night and warns drivers with a blue flashing light, day or night, when conditions are conducive to ice.

Dual can delineate lane layouts ten times further ahead than retro-reflective markers

Drivers make mistakes; however, mistakes should not result in serious injury or worse. Iternz technology gives more information on road layout in poor light or at night, helping drivers to make safer decision on wet or unfamiliar roads.

Six advantages of Iternz Dual

Up to ten times the visibility of reflective markers on road layout and lane demarcation at night.

The world's first dual-purpose lane marker and ice warning device.

Product lifetime is expected to exceed the lifetime of the road surface.

Recessed road markers cannot be torn from the road creating a hazard, will not fade with age, and can be snow-ploughed.

Over the lifetime of the Dual, multiple reflective units would need to be replaced, with attendant road closure costs, so there is an overall cost saving in Dual to road operators.

No wires or induction cables: simple and cost-effective to install.

Illustrative graphic reflective pavement marker



Illustrative graphic Internally illuminated marker



Use and placement of Dual – A better alternative to retro-reflective markers

The Dual illuminated marker is recommended to replace retro-reflective cat's-eyes on sections of roadway prone to ice or where frequent gritting is undertaken. On tight corners, or winding roads, it is recommended that Dual markers are spaced ahead of the bend, and more closely together, to help the driver respond quickly to the danger.

Installation on New Zealand roads requires permission of Road Controlling Authorities with appropriate traffic management practices. Installation guidance is available to RCAs

Technical Specifications

Construction: Grey aluminium with clear polycarbonate lens.

Dimensions: 125mm Ø, depth 50mm, weight 0.9kg, with 8-anchoring fins, 4.0 mm surface protuberance.

Surface features: anti-skid, scratch resistant, self-cleaning surface.

Light configuration: Constant 90lm white or constant 38lm yellow, self-activated 25lm, 3Hz blue flash.

Blue Flash: Activated when Dual device temperature falls below zero degrees Celsius.

Beam Angle: 119.3° at 50% I_{max}.

Ambient light: Activation at 101lux. Turns off 5 mins after ambient light exceeds threshold.

Solar charge time: 8 hours.

Discharge time: 72-96 hours with no recharge. ie: upto 12 rainy days

Lifespan: No more than 10% lux degradation after 5 years. Should exceed lifetime of road surface.

Compression: Certified at 70kN.

Ingress Protect: IP68 certified.

Visible over 500m

Vibration & Bump: PASSED shock testing

Temperature: Certified range -12° to +56°, (can operated in a considerably wider range).

Solar Power – Energy efficient, environmentally friendly, easy to install, long life

Iternz solar powered markers operate continually and automatically activate when ambient light drops below, or exceeds, 101 lux, with a 5-minute buffer before turning off. Solar-power markers do not require power cables or induction loops to operate, eliminating considerable cost and road traffic disruption on installation. Additionally, the Dual uses a unique voltage protection to ensure the blue flash still operates, should the white not have sufficient solar energy in storage.

Alternative uses – More than a road marker

Iternz illuminated markers can be used in settings where street lighting is uneconomic or environmentally insensitive.

Dual ice warning markers can be installed on private footpaths and walkways to warn pedestrians or residents of hazardous pavement conditions.

Iternz markers can be used to delineate cycle ways in the same arrangement as on roads.

Configuration – Any configuration you like

Dual trials are being undertaken in bi-directional constant white, flashing blue format.

Other configurations include:

Yellow / blue flash

Yellow / White

White only

Yellow only

Green only

Red only

Markers can be configured uni-directional or bi-directional.

Solar Power Limitations Waiver:

By accessing this data sheet/website, you acknowledge and understand that solar power systems depend on sufficient daylight for optimal performance. Power output and battery charging may be limited during periods of low or no sunlight. No liability is assumed for reliance solely on solar energy. Our Dual is compliance with Waka Kotahi M29:2021 standards

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Quality Marks – CE, FCC, Rohrs



CE certification

EN IEC 55015: 2019+A11 2020
EN 61547: 2009
EN IEC 61000:3-2:2019
EN61000-3-3:2013+A1:2019



FCC certification

CFR Title 47 Part 15 Subpart
B:2017



RoHS (China) certification

Compliance with RoHS directive 2011/65/EU Annex2 amending
annex [EU]2015/863 and amending annex [EU]/2017/2102
Lead, Cadmium, Mercury, Hexavalent Chromium, PCBBs, PBDEs,
DEHP, BBP, DBP & DIBP content

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