



Bright as the Sun, faint as a black dwarf

The LED controller with the world's highest contrast of 1/10 million [patent pending]

Born in planetariums, ultra-wide-range lighting system

NanoDimmer

The NanoDimmer is Ohira Tech Ltd.'s patent-pending lighting system using an LED of ultra-wide contrast range.

Conventional LED brightness controllers have limited contrast ranges due to LED response.

In dark environments, such as planetarium domes, cove lights are often used for illumination. However, the brightness of these lights cannot be lowered below a significantly high threshold level. Due to this limitation, conventional planetarium cove lights cannot be used to simulate nautical or astronomical twilights.

The NanoDimmer came to meet these requirements. It is developed by Ohira Tech, the manufacturer of Megastar, the world's first multimillion projector, and the first LED star projector.

NanoDimmer works with three colors RGB bright strips, enabling an ultra-wide contrast rate of 1 in 10 million.



Features of the NanoDimmer

Ultra-wide contrast range

(the world's highest range)
Enables a full-range smooth transition from faintest to brightest light

Full color

Supports RGB 3 colors

Computer and DMX control

Can be controlled using a computer or DMX512 controller

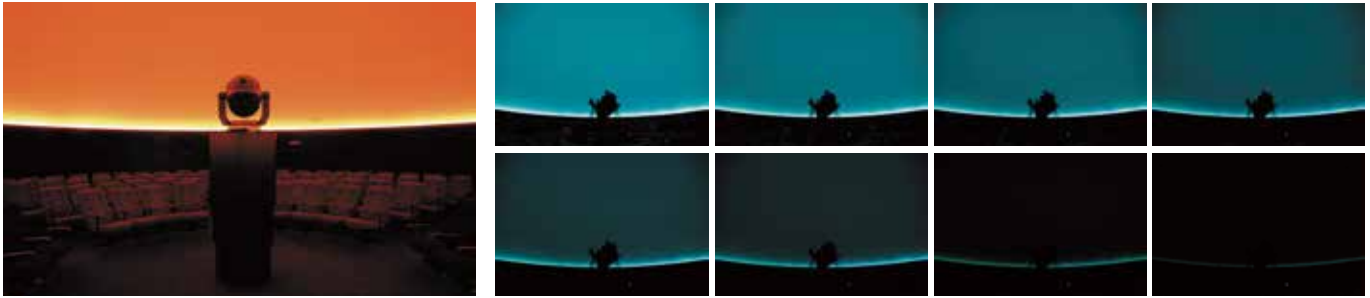
Use of LED strips

Can function with various types of LED strips of 24 V

Ohira Tech

Applications

Planetariums and theaters



* NanoDimmer in Bangkok planetarium

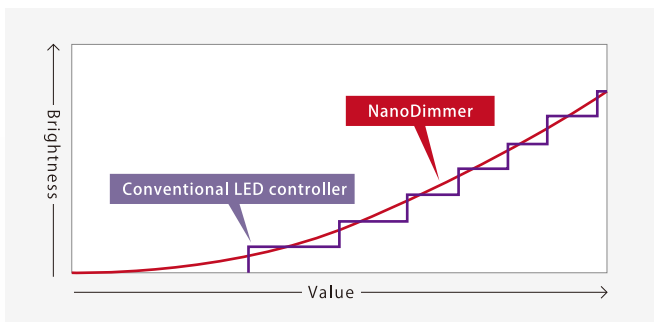
Interior lights

Cove lights, and smooth variation in the reproduction of natural lights

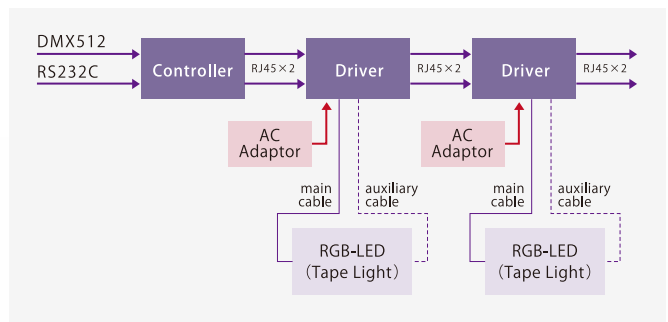


Diagrams

[System diagram]



[System diagram]



Specifications

Control Unit

	NanoDimmer Control Unit
Power	+5 V DC 2 A (provided with AC adapter 100~240 V)
Front indicators	Power, input control, state, and output control
Control interface	RS232C or DMX512 (switching)
Driver unit connections	Dual RJ45 (two sets)
Dimensions	W250 × H44 × D102
Weight	820g
Other	Optional light-on button Optional 19 in. rack mounting ears

Driver Unit

	NanoDimmer Driver Unit
Power	+24 V DC maximum 12 A
Control unit/driver unit connections	Dual RJ45 (two sets: input & output)
LED strip connection	Phoenix contact MSTB2.5-4-GF-5.08 (MSTB 2.5-4-STF-5.08 on LED side)
Dimensions	W130 × H30 × D82
LED power output	Maximum 4 A per channel
Weight	160g
Used LED strips	ColorBright RGB color-changing 300 LED strip light CB-RGB2-24V. Supports up to 10m reel
Used AC adapters	Mean Well HLG-320H-24A (power up to two aforementioned LED strips) Mean Well HLG-240H-24A (power up to one aforementioned LED strip)



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