



DL90

LED Recessed Downlight

IP54
Trio Colour



What Is Tunable White Technology?

As humans, it is not uncommon for us to spend most of our day in enclosed areas. Seamlessly adjustable colour temperatures – from cool white to warm white – bring natural lighting effects, with all of the associated advantages, from outside to inside, and make it possible to properly target individual needs and situations. As a result, Tunable White supports the concept of Human Centric Lighting (HCL), which puts people at the heart of lighting design. As well as perfect conditions for reading and working, HCL is primarily focused on the circadian rhythm, which controls, among other things, our body clocks.

As studies have shown, cool white light with a high proportion of blue light has a stimulating effect and promotes concentration, whereas warm white light is calming. Therefore, Tunable White creates an environment that helps us in a natural way – just like daylight.

The Primary Benefit of Tunable Lighting: Circadian Entrainment

Scientific studies have shown that when indoor light mimics the warm to cool cycle of natural daylight, people receive a number of benefits, including a more restful night's sleep and greater alertness during the day. This circadian entrainment is especially beneficial for those who do not have access to natural daylight, such as shift workers, office workers, hospital and nursing home patients, and correctional inmates.

PC DIFFUSER

with even light output



Introduction



DL90 tunable white LED down light adopts dual-color temp SMD complying to DT8 standard; With Dual DALI driver which meets DALI2 standard. PC diffuser with even light output. White, silver, chrome surface treatment are available for customer's preference.

Features

1. Up to 70% energy saving compared to standard CFL.
2. 90° wide beam angle.
3. White, silver, chrome surface treatment are available.
4. Tunable white; with Dual DALI driver which complies to DALI2 standard.

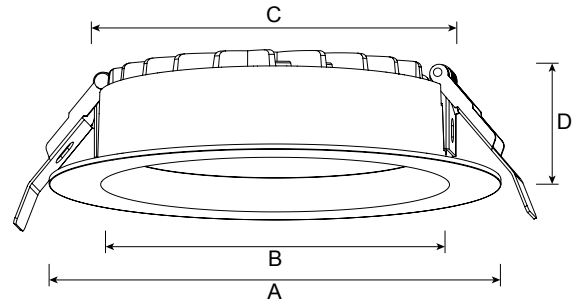
Application Areas

It is designed for general lighting applications in office, supermarket, shop, school, hotel, etc. It is also widely used for public areas, such as stairway, lobby, reception, corridors etc.



Measurement

Model	Dimension(mm)				Size(mm)
	A	B	C	D	
2.5"	85	65	68	39	Ø85*39
3"	110	80	88	38	Ø110*38
3.5"	120	86	100	45	Ø120*45
4"	145	104	118	45	Ø145*45
5"	170	131	136	45	Ø170*45
6"	190	151	155	45	Ø190*45
8"	228	180	198	45	Ø228*45



Technical Data Sheet

Model No.			GUDL90 -2.5-8W	GUDL90 -3-10W	GUDL90 -3.5-13W	GUDL90 -4-15W	GUDL90 -5-18W	GUDL90 -6-18W	GUDL90 -6-25W	GUDL90 -6-35W	GUDL90 -8-18W	GUDL90 -8-25W	GUDL90 -8-35W
Watt(W)			8W	10W	13W	15W	18W	18W	25W	35W	18W	25W	35W
Dimension(mm)			Ø85*39	Ø110*38	Ø120*45	Ø145*45	Ø170*45	Ø190*45			Ø228*45		
Cutout(mm)			Ø70-75	Ø90-95	Ø100-110	Ø120-130	Ø140*150	Ø160-170			Ø200-210		
Rated Input Voltage(V)			AC230V										
Input Voltage(V)			AC200-240V										
LED			SMD										
SDCM			<6										
CCT(K)			3000K-5700K										
Luminous Flux (lm) ±5%	TW	DIM	880-960	1000-1180	1000-1180	1380-1580	1800-1980	1700-1880	2550-2630	3360-3850	1680-2020	2380-2620	3500-4000
CRI			≥80, 90										
Beam Angle (°)			90°										
LED Driver			Built-out										
DIM			On-Off / Triac / 0-10V / DALI										
CCT Selection Switch			Yes										
Protection Class			Class II										
IP Rating			IP54										
IK Rating			IK06										
Finishing color			Black RAL9005 / White RAL 9016										
Material			PC / Aluminium										
Lifetime (hr)			40,000										
Glow wire test (°C)			850°C										
Operating Temp.(°C)			-20°C ~45°C										
Storage Temp.(°C)			-20°C ~65°C										
Installation			Recessed										
Brand Driver option			-										

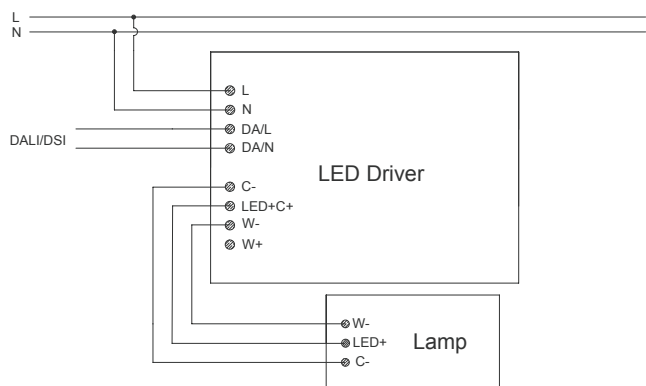
Driver Datasheet (DALI Dimmable)

Power	8W/10W	13W	15W	18W	25W	35W
Rated Input Voltage(V)	AC230V					
Frequency	50Hz					
Input Voltage	AC200-240V					
Efficiency	≥80%	≥80%	≥82%	≥82%	≥83%	≥83%
Total load wattage	8W/10W±10%	13W±10%	15W±10%	18W±10%	25W±10%	35W±10%
Power Factor	0.8		0.9			
Rated Input Current	≤0.07A	≤0.09A	≤0.1A	≤0.11A	≤0.16A	≤0.22A
Full load output voltage	DC30-40V					
Rated output current	250mA	300mA	350mA	450mA	600mA	850mA
Output current range	250mA±5%	300mA±5%	350mA±5%	450mA±5%	600mA±5%	850mA±5%
Power tolerance	±5%					
Current output tolerance	±5%					
Dimming Range	1%-100%					
Short circuit protection	PASS					
Over voltage protection	PASS					
Over temperature protection	PASS					
THD	<20% @ 230V					
Surge	L-N 500V			L-N1KV		
Withstand voltage	AC3750V					

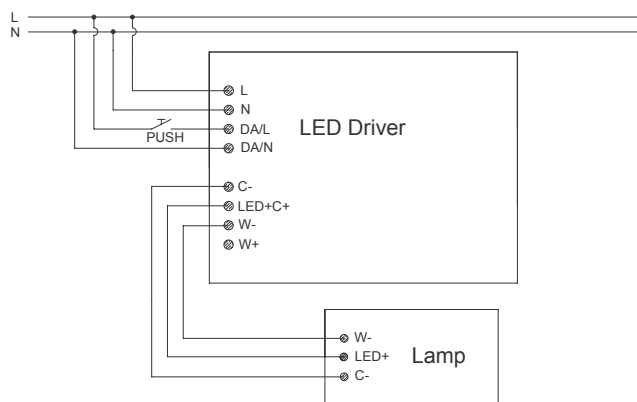
Note: DALI & 0-10V driver specification, please refer to individual driver datasheet.

Push Dimming Connection

Dali Dimming Connection
Common Anode Wiring



Push Dimming Connection
Common Anode Wiring



Push Dimming Function

1. Combines DALI and SwitchDim functions

The DALI and SwitchDim functions are automatically selected according to the voltage connected to DALI dimming interface. If the connected voltage is 9.5-22.5V DALI signal, it will be automatically selected as the DALI function. If the connected voltage is 200V~240V AC at 50Hz or 60Hz, it will be automatically selected as the PUSH dimming function.

2. Switch Dim Way

Short press: Press the reset button quickly and let go, the button will automatically restore the disconnected state, press button duration is 50ms-600ms.

Long press: Press the reset button quickly and keep it for more than 1000ms.

Dimming signal: Connect 50Hz or 60Hz AC200~240V voltage through a reset switch to connect the L and N terminals to the DALI interface.

3. Switch Dim Function

No	Function	Operation	Illustration
1	Memory	Power on	When the LED driver is powered on, it will restore the status before the LED driver was powered off; If the lamp is turned off before power off, it will still be off status after power on; If the lamp is 50% brightness before power off, then it will automatically restore to 50% brightness.
2	Turn on/off	Short press (< 0.6 s)	Brief push (< 0.6 s) switches to turn LED Driver ON and OFF; The dim level is saved at power-down and restored at power-up.
3	Dimming	Pushbutton held 1s-3s	When pushbutton is held, the LED lamps are dimmed; After repush, the LED lamps are dimmed in the opposite direction; Stop dimming when pushbutton released, dimming range 1-100%.
4	Synchronization	Power on	In the same Switchdim system, 10s push to synchronize LED lamps to 50% dimming level; if LED lamps are in different dimming levels or opposite dimming directions (e.g. after a system extension).
5	Adjustable fade time	Long press 20s	The fade time decides dimming speed. The shorter the fade time, the faster the dimming speed; Fade time defaults 3s, long press 20s for fade time 6s and 100% brightness; Long press 10s, all lamps will be synchronized and turn into 50% brightness; Long press 20s again, the fade time go back to default setting; The brightness will remain 100% for long tim push butoon held.
1	Reset to factory settings	Long press 10s for 4 times	Factory default settings are restored by 4 times of 10s long press (the interval does not exceed 2s). Restore fade time, switch status, brightness, control mode, etc. to factory settings.