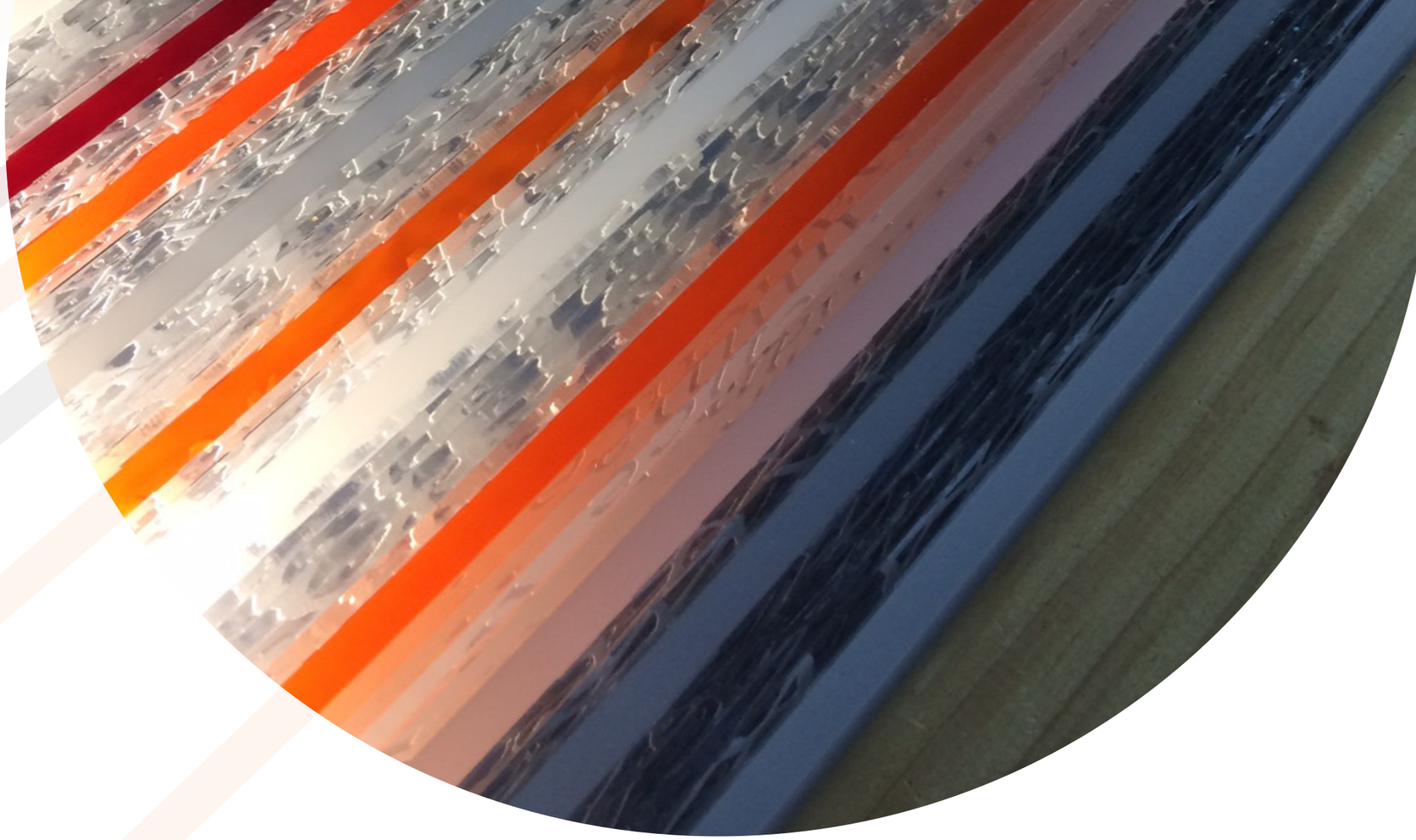


PROGENY OF LIGHT #1

An illuminated wall intervention

ARTWORK COMMISSIONED BY:
ANNETTE SEEMAN AND JOHN TESCHENDORFF 2017

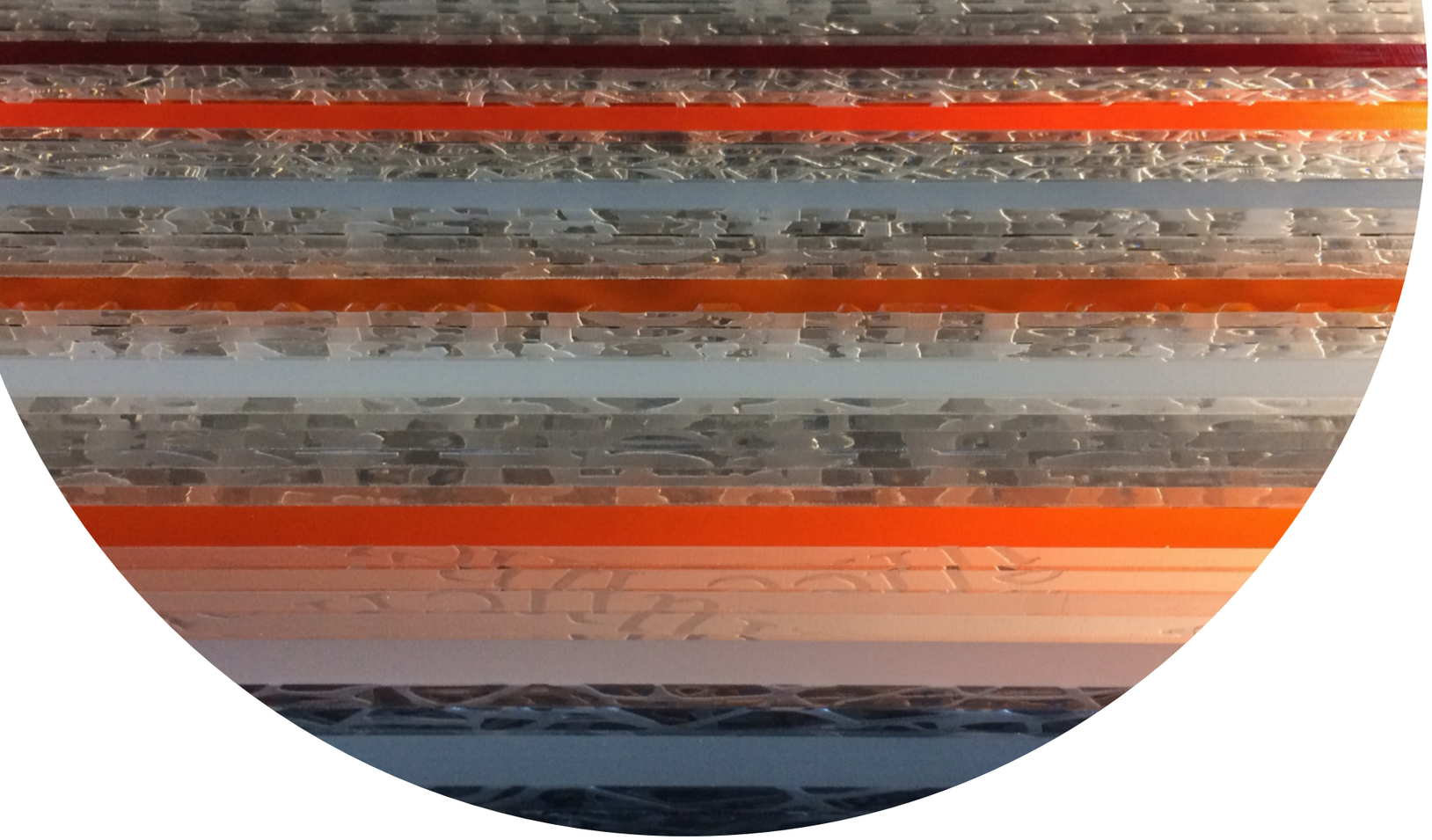
ARTIST: PAMELA GAUNT
WEBSITE: HTTP;//WWW.PAMELAGAUNT.COM.AU/

PDF DESIGN LAYOUT: JACQUE SHAW

PROGENY OF LIGHT #1

MATERIALS:
LASER ETCHED AND CNC ROUTED MIRROR
ACRYLIC AND PLEXIGLASS; LEDS;

FABRICATORS:
ARTCOM FABRICATION, LIGHT APPLICATION
DIGITAL DESIGN FOR FABRICATION: QUYEN DO

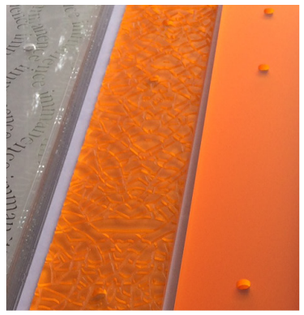


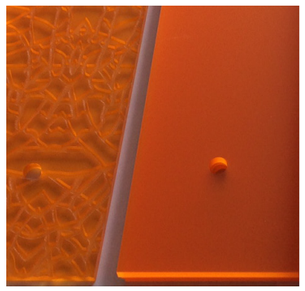
ILLUMINATED ARTWORKS – A GENERAL STATEMENT

Gaunt's longstanding interest in pattern and layering has continued in combination with the amalgamation of hand and industrial processes. Progeny of Light #1, created for this commission, is part of a series of illuminated works that broadly explores illumination as a metaphor used in everyday life, philosophy, literature and spirituality

This commissioned work operates beyond the idea of mere lighting to express a sense of wonder in the shift between day and nocturnal presence. Intending to create an illuminated form with an intentional ambiguity that evokes a sensorial response from the viewer.

The pieces can also move from horizontal to vertical positions via the use of fabricated acrylic armatures. The format allows for ease of layering and stacking, a 'strata' of comprised interchangeable components.





GENERAL METHODOLOGY

The testing of ideas requires several prototypes in paper, fabric, acrylic, wood veneer, mirror acrylic, plexiglass, and sandblasted glass.

Key industrial processes included routing, laser etching, and sandblasting, often used in combination on a single substrate. The particular processes are chosen for their ability to make industrial processes appear 'non-industrial' or hand produced - as a form of disruption or contradiction to their incorporation.

Drawings of random, ubiquitous patterns evolved that were digitally reproduced for industry application. For example, whilst making ice cream in a refrigerated ice cream maker, an ice crystal pattern appeared on the inside of the refrigerated container before the ice cream mixture was inserted. The image was documented, drawn, and converted into a digital file. On another occasion a cracked glass screen was photographed in an airport check-in lounge. This was also documented with the intention of transferring an image of cracked glass onto undamaged glass.

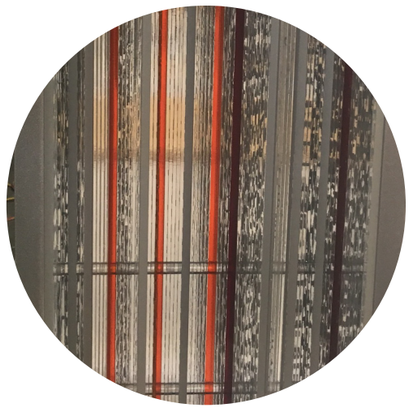
Each pattern became an integral part of the layering, but provided a disruption to the reading of the work. This often came about by sandblasting both sides of glass surfaces or layering laser etching on both sides of acrylic mirror and plexiglass. The double blasting creates a blurred effect, giving rise to ambiguous interpretations of the work.

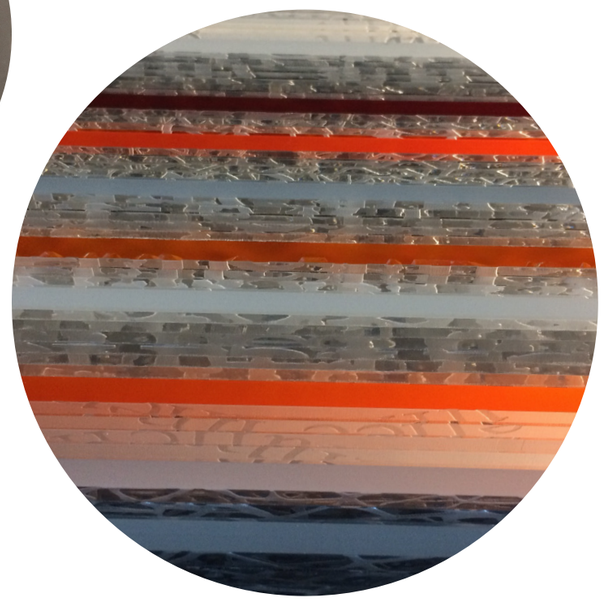
Through initial drawings, several patterns are explored via hand cutting mask out material and sandblasting, others were digitally rendered and industrially fabricated onto a range of substrates. In addition to patterned surfaces the incorporation of text as a surface aesthetic is explored within the work.

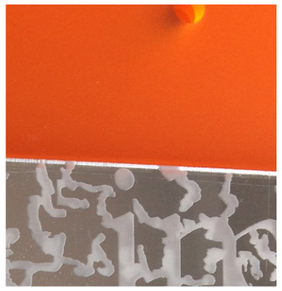
Flatlight is often selected as a form of illumination due to the non-point source aspect provided. Flatlight offers more potential as a material for many projects. It fits Gaunt's natural proclivity to layer as a methodology to build forms. Its 'flatness', thinness, lightness, ability not to emit heat, non point source illumination, offer ideal qualities for its incorporation into the layering process. Flatlight can become an 'invisible' illuminated layer – visible only through the light it emits but importantly, not detectable as a light source.

For this specific commission, flexible LEDs were incorporated into the built space because it was necessary to view the work from both sides of the wall it occupies.

Annette Seeman and Pamela Gaunt

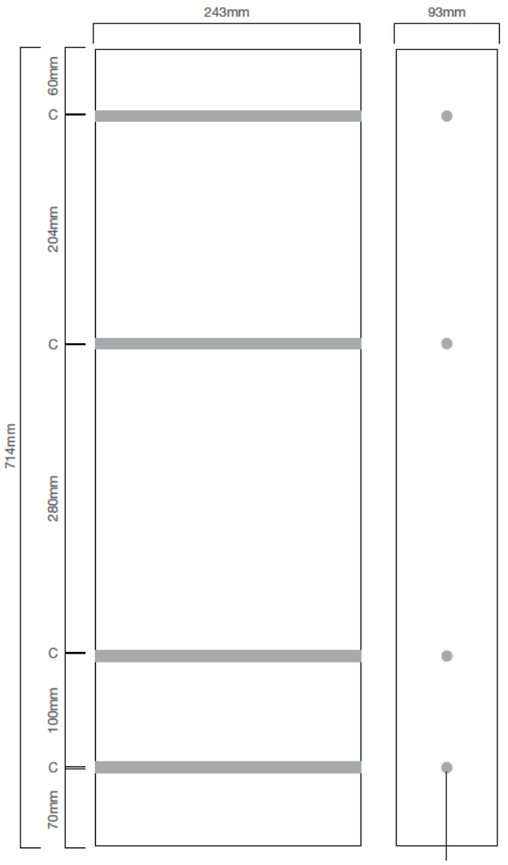


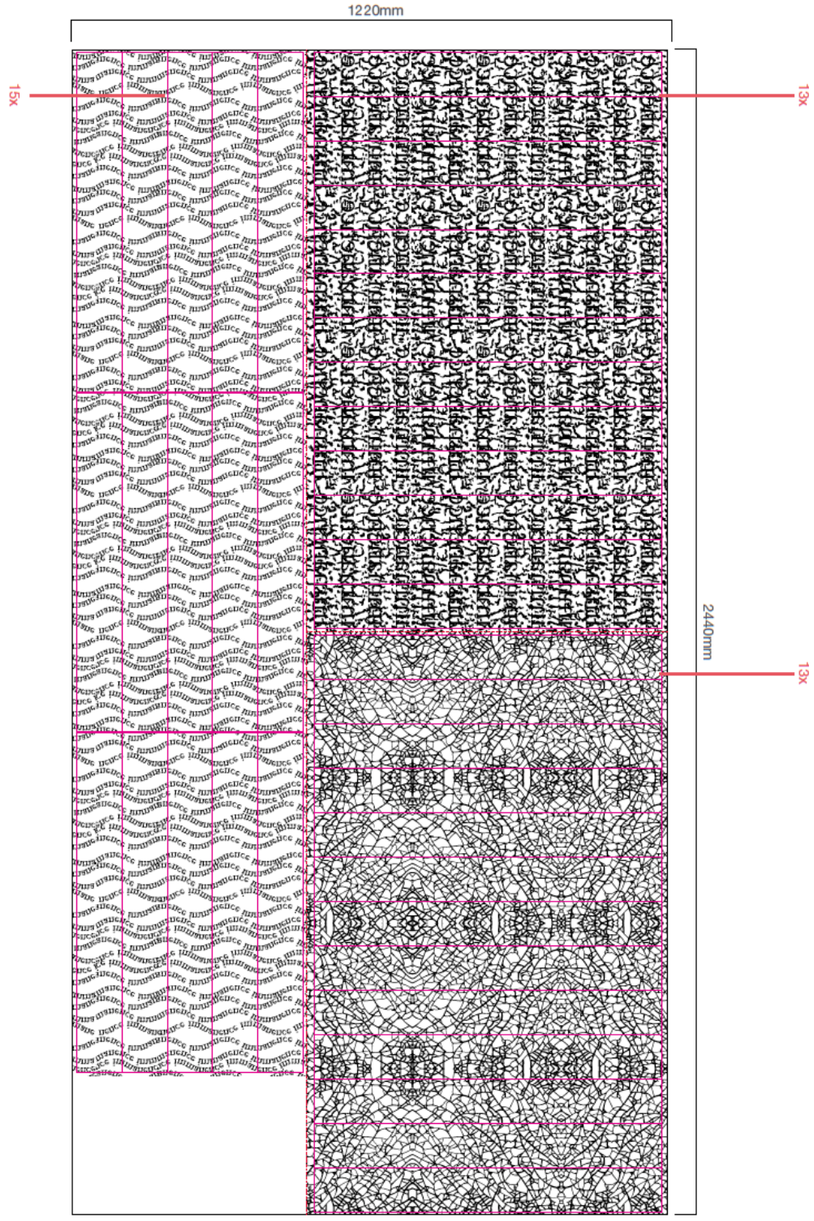




TECHNICAL INFORMATION

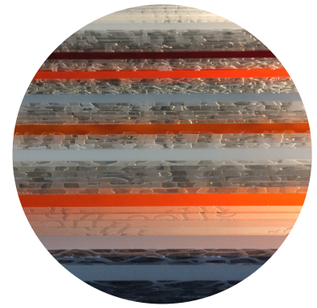
Artcom_Acrylic Window_Proposal 2_03-03-2017

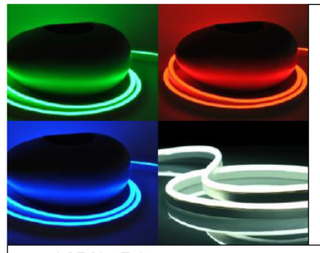




TECHNICAL INFORMATION

pureLED FlexTube Flat, 5700K Cool White with a Meanwell HLG-40H-24 transformer





pureLED

FlexTube Flat

PL-FlexTube-aa-F/24V

Flexible diffused LED alternative to traditional neon

The pureLED FlexTube range includes a wide selection of neon-like LED strip. Manufactured from UV resistant PVC and IP68 rated, the FlexTube range has been designed for both indoor and outdoor environments and can be utilised in a wide range of applications including signage, cove lighting, feature lighting, decorative trim and more. FlexTube is available in a range of single colour variants and full colour RGB to meet the needs of any installation where a dimmable continuous and diffused light is required.

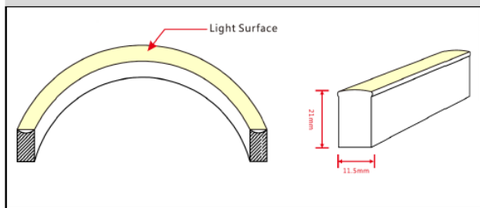
FlexTube is available in a range of profiles including flat face, domed face, side emitting and front emitting. Coloured diffusers are also available to maintain colour visibility when not illuminated.

A range of stylish aluminium extrusions, trim pieces, joiners and crossover joints are available to ensure a high aesthetic standard is maintained where FlexTube is directly viewable.

Specifications

Type	PL-FlexTube-aa-F/24V
Available Colours	Red, Green, Blue, Amber, Orange, 2000K, 2400K, 2700K, 3000K, 3500K, 4500K, 5700K, 6500K, Full Colour RGB, CCT Adjustable.
LED Type and Quantity Per Metre	Single Colour—72x SMD per metre RGB—60x SMD per metre
Lumen Output	Red—100lm, Amber—75lm, Blue—35lm Green—250lm, 2000K to 2400K—220lm, 2700K to 6500K—320lm RGB—R-20lm, G-75lm, B-15lm, W-110lm
CRI	68~80
Power (at maximum output)	RGB—12W/m, Blue, Green, Whites—11W/m,. Red, Amber, Orange—7.2W/m.
IP Rating (With equal or better rated connector)	IP68
Beam Angle	160 Degree
Cut Length	Red, Amber, Orange—125mm RGB—100mm Blue, Green, Whites, CCT Adjustable—83.3mm
Minimum Bend Diameter	120mm
Max Continuous Length (Powered one end/both ends)	RGB—10m/20m, Red, Amber, Orange—15m/30m, Green, Blue, Whites, CCT Adjustable—10m/20m
Available Voltages	24VDC
Dimming	Constant Voltage Common Anode PWM
Operating Temperature	-20°C~45°C

Dimensions



Ordering Code

PL-FlexTube-aa-F/24V

aa	Colour:	RGB, R, G, B, A, O, 2000, 2400, 2700, 3000, 3500, 4000, 4500, 5700, 6500

pureLED
www.pureled.com.au

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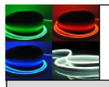
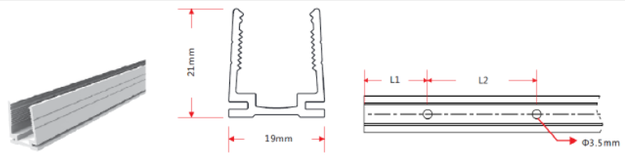


pureLED FlexTube Flat PL-FlexTube-aa-F/24V

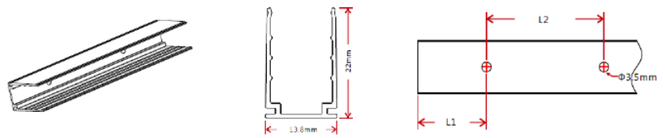
Mounting Profiles

Plastic Profile



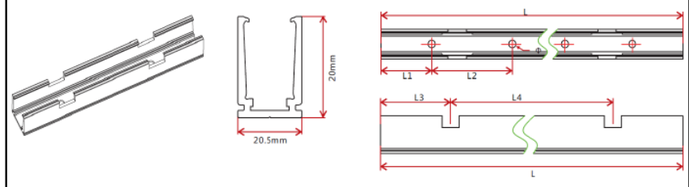
W*H(mm)	Standard Length (L:mm)	L1 (mm)	L2 (mm)	Screw Hole (Φ:mm)	Hole Number
19*21	300	50	200	Φ3.5	2
	500	50	200	Φ3.5	3
	1000	100	200	Φ3.5	5
	2000	100	200	Φ3.5	10

Aluminium Standard Profile



W*H(mm)	Standard Length (L:mm)	L1 (mm)	L2 (mm)	Screw Hole (Φ:mm)	Hole Number
13.8*22	30	15	/	Φ3.5	1
	50	25	/	Φ3.5	1
	500	50	200	Φ3.5	3
	1000	100	200	Φ3.5	5
	2000	100	200	Φ3.5	10

Aluminium Self-Locking Profile



W*H(mm)	Standard Length(L : mm)	L1(mm)	L2(mm)	L3(mm)	L4(mm)	Hole Screw(Φmm)	Hole Number	Clip Number
20.5*20	35	17.5	/	17.5	/	Φ3 5	1	1
	50	25	/	25	/	Φ3 5	1	1
	500	100	/	150	200	Φ3 5	2	2
	1000	100	250	150	350	Φ3 5	4	3
	2000	100	250	125	350	Φ3 5	8	6

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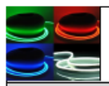
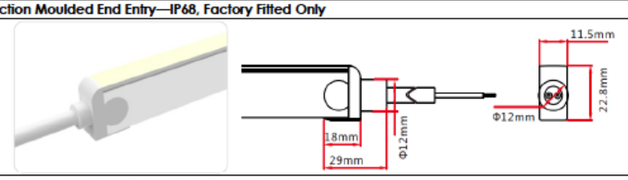


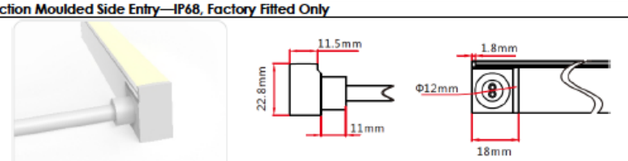
pureLED FlexTube Flat PL-FlexTube-aa-F/24V

Connector Options

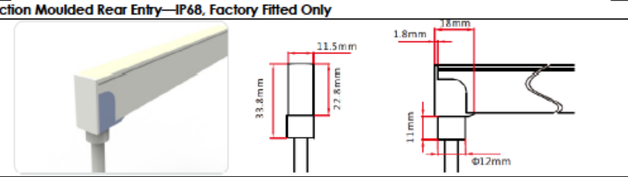
Injection Moulded End Entry—IP68, Factory Fitted Only



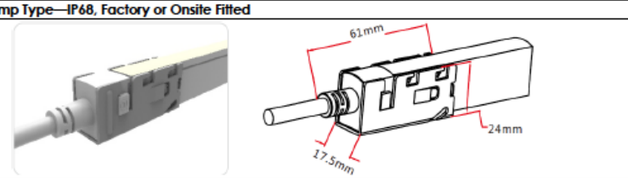
Injection Moulded Side Entry—IP68, Factory Fitted Only



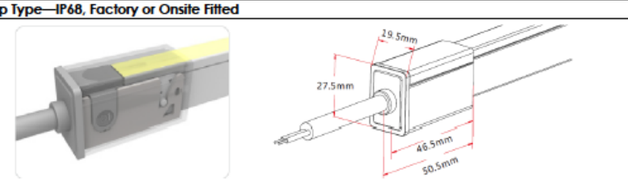
Injection Moulded Rear Entry—IP68, Factory Fitted Only



Clamp Type—IP68, Factory or Onsite Fitted



Snap Type—IP68, Factory or Onsite Fitted



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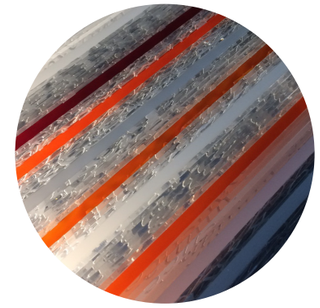
TECHNICAL INFORMATION

Transformer_HLG-40H-spec



40W Single Output Switching Power Supply — HLG-40H series

■ Features :
- Universal AC input / Full range (up to 305VAC)
- Built-in active PFC function
- Protections: Short circuit / Over current / Over voltage / Over temperature
- Cooling by free air convection
- OCP point adjustable through output cable or internal potentiometer
- IP67 / IP65 design for indoor or outdoor installations
- Class 2 power unit
- Three in one dimming function (1~10Vdc or PWM signal or resistance)
- Suitable for LED lighting and moving sign applications
- Compliance to worldwide safety regulations for lighting
- Suitable for dry / damp / wet location
- 7 years warranty (Note.10)

SELV IP65 IP67

HLG-40H-12A Blank : IP67 rated. Cable for I/O connection.
A : IP65 rated. Output voltage and constant current level can be adjusted through internal potentiometer.
B : IP67 rated. Constant current level adjustable through output cable with 1~10Vdc or 10V PWM signal or resistance
D (option) : IP67 rated. Timer dimming function, contact MEAN WELL for details.

SPECIFICATION

MODEL		HLG-40H-12	HLG-40H-15	HLG-40H-20	HLG-40H-24	HLG-40H-30	HLG-40H-36	HLG-40H-42	HLG-40H-48	HLG-40H-54
OUTPUT	DC VOLTAGE	12V	15V	20V	24V	30V	36V	42V	48V	54V
	CONSTANT CURRENT REGION Note.4	7.2 ~12V	9 ~ 15V	12 ~ 20V	14.4 ~ 24V	18 ~30V	21.6 ~36V	25.2 ~42V	28.8 ~48V	32.4 ~ 54V
	RATED CURRENT	3.33A	2.67A	2A	1.67A	1.34A	1.12A	0.96A	0.84A	0.75A
	RATED POWER	39.96W	40.05W	40W	40.08W	40.2W	40.32W	40.32W	40.32W	40.5W
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	150mVp-p	200mVp-p	200mVp-p	200mVp-p	200mVp-p	300mVp-p	300mVp-p
	VOLTAGE ADJ. RANGE Note.6	10.8 ~ 13.5V	13.5 ~ 17V	17 ~ 22V	22 ~ 27V	27 ~ 33V	33 ~ 40V	40 ~ 46V	44 ~ 53V	49 ~ 58V
	CURRENT ADJ. RANGE	Can be adjusted by internal potentiometer A type only								
		2 ~ 3.33A	1.6 ~ 2.67A	1.2 ~ 2A	1 ~ 1.67A	0.8 ~ 1.34A	0.67 ~ 1.12A	0.58 ~ 0.96A	0.5 ~ 0.84A	0.45 ~ 0.75A
	VOLTAGE TOLERANCE Note.3	±2.5%	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	LOAD REGULATION	±2.0%	±1.5%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	SETUP, RISE TIME Note.8	500ms, 80ms at full load 230VAC / 115VAC								
	HOLD UP TIME (Typ.)	16ms/230VAC 16ms/115VAC at full load								
INPUT	VOLTAGE RANGE Note.5	90 ~ 305VAC 127 ~ 431VDC								
	FREQUENCY RANGE	47 ~ 63Hz								
	POWER FACTOR (Typ.)	PF>0.98/115VAC, PF>0.95/230VAC, PF>0.92/277VAC at full load (Please refer to "Power Factor Characteristic" curve)								
	TOTAL HARMONIC DISTORTION	THD< 20% when output loading≥60% at 115VAC/230VAC input and output loading≥75% at 277VAC input								
	EFFICIENCY (Typ.)	86.5%	86.5%	88%	88%	88.5%	88.5%	88.5%	89.5%	89.5%
	AC CURRENT (Typ.)	0.43A/115VAC 0.24A/230VAC 0.23A/277VAC								
	INRUSH CURRENT(Typ.)	COLD START 50A(twidth=210μs measured at 50% Ipeak) at 230VAC								
	MAX. No. of PSUs on 16A CIRCUIT BREAKER	12 units (circuit breaker of type B) / 20 units (circuit breaker of type C) at 230VAC								
	LEAKAGE CURRENT	<0.75mA / 277VAC								
PROTECTION	OVER CURRENT Note.9	95 ~ 108%								
		Protection type : Constant current limiting, recovers automatically after fault condition is removed								
	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed								
	OVER VOLTAGE	15 ~ 21V	18 ~ 24V	25 ~ 30V	28 ~ 35V	35 ~ 43V	41 ~ 49V	48 ~ 58V	54 ~ 65V	59 ~ 68V
		Protection type : Shut down o/p voltage, re-power on to recover								
	OVER TEMPERATURE	Shut down o/p voltage, re-power on to recover								
ENVIRONMENT	WORKING TEMP.	-40 ~ +70°C (Refer to "Derating Curve")								
	WORKING HUMIDITY	20 ~ 95% RH non-condensing								
	STORAGE TEMP., HUMIDITY	-40 ~ +80°C, 10 ~ 95% RH								
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 60°C)								
	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes								
SAFETY & EMC	SAFETY STANDARDS Note.7	UL8750(type"HL"), CSA C22.2 No. 250.0-08 (except for 48V, 54V), EN61347-1, EN61347-2-13 independent, IP65 or IP67, J61347-1, J61347-2-13 approved ; design refer to UL60950-1, TUV EN60950-1, EN60335-1								
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC I/P-FG:2KVAC O/P-FG:1.5KVAC								
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C/ 70% RH								
	EMC EMISSION	Compliance to EN55015, EN61000-3-2 Class C (≥60% load) ; EN61000-3-3								
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; EN61547, EN55024, light industry level (surge 4KV), criteria A								
OTHERS	MTBF	336.9Khrs min. MIL-HDBK-217F (25°C)								
	DIMENSION	171*61.5*36.8mm (L*W*H)								
	PACKING	0.73Kg; 20pcs/15.6Kg/0.8CUFT								

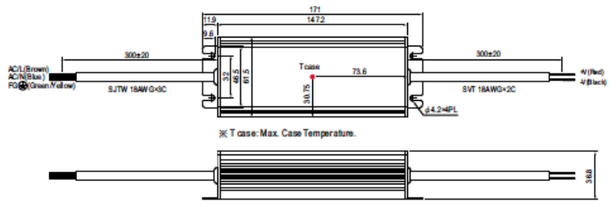
NOTE
1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Tolerance : includes set up tolerance, line regulation and load regulation.
4. Please refer to "DRIMING METHODS OF LED MODULE".
5. Derating may be needed under low input voltages. Please check the static characteristics for more details.
6. A type only.
7. Safety and EMC design refer to EN60598-1, CNS15233, GB7000.1, FCC part 8.
8. Length of set up time is measured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time.
9. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.
10. Refer to warranty statement.
11. To fulfill requirements of the latest ErP regulation for lighting fixtures, this LED power supply can only be used behind a switch without permanently connected to the mains.

40W Single Output Switching Power Supply — HLG-40H series

■ Mechanical Specification

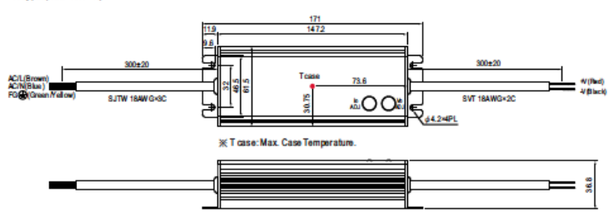
Case No.957B Unit:mm

Blank:(HLG-40H)



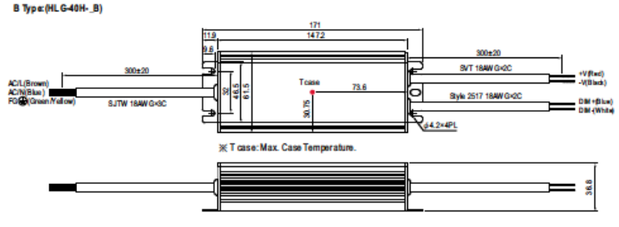
※IP67 rated. Cable for I/O connection.

A Type:(HLG-40H-_A)



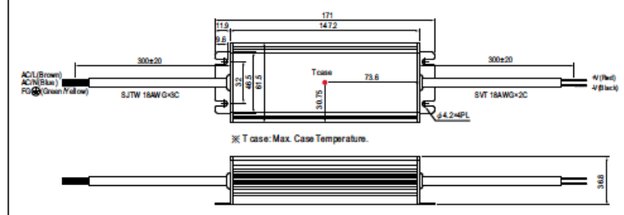
※IP65 rated. Output voltage and constant current level can be adjusted through internal potentiometer.
(Can access by removing the rubber stopper on the case.)

B Type:(HLG-40H-_B)



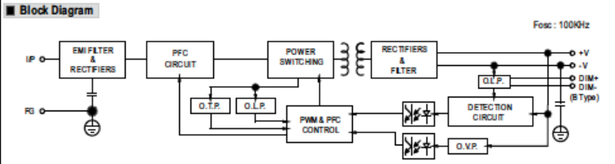
40W Single Output Switching Power Supply — HLG-40H series

D Type(option):(HLG-40H-_D)

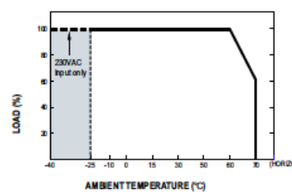


※IP67 rated. Timer dimming function, contact MEAN WELL for details.

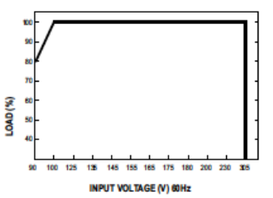
■ Block Diagram



■ Derating Curve



■ Static Characteristics

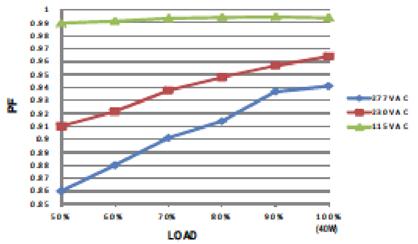


TECHNICAL INFORMATION

Transformer_HLG-40H-spec

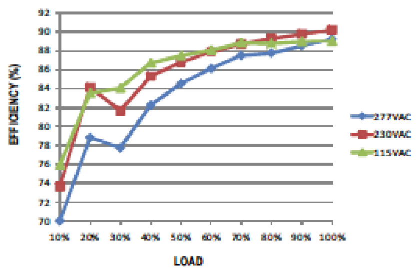
Power Factor Characteristic

Constant Current Mode



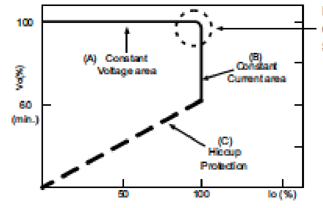
EFFICIENCY vs LOAD (48V Model)

HLG-40H series possess superior working efficiency that up to 89.5% can be reached in field applications.



DRIVING METHODS OF LED MODULE

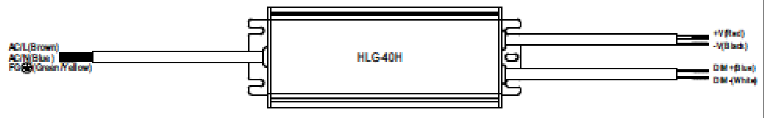
There are two major kinds of LED drive method "direct drive" and "with LED driver".
A typical LED power supply may either work in "constant voltage mode (CV) or constant current mode (CC)" to drive the LEDs.
Mean Well's LED power supply with CV+CC characteristic can be operated at both CV mode (with LED driver, at area (A) and CC mode (direct drive, at area (B).



Typical LED power supply I-V curve

In the constant current region, the highest voltage at the output of the driver depends on the configuration of the end systems.
Should there be any compatibility issues, please contact MEAN WELL.

DIMMING OPERATION (for B-type only)



※ Built-in 3 in 1 dimming function, IP67 rated. Output constant current level can be adjusted through output cable by connecting a resistance or 1 ~ 10Vdc or 10V PWM signal between DIM+ and DIM-.

※ Please DO NOT connect "DIM-" to "-V".

※ Reference resistance value for output current adjustment (Typical)

Resistance value	Single driver	10KΩ	20KΩ	30KΩ	40KΩ	50KΩ	60KΩ	70KΩ	80KΩ	90KΩ	100KΩ	OPEN
	Multiple drivers (N=driver quantity for synchronized dimming operation)	10KΩ/N	20KΩ/N	30KΩ/N	40KΩ/N	50KΩ/N	60KΩ/N	70KΩ/N	80KΩ/N	90KΩ/N	100KΩ/N	----
Percentage of rated current		10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	95%~108%

※ 1 ~ 10V dimming function for output current adjustment (Typical)

Dimming value	1V	2V	3V	4V	5V	6V	7V	8V	9V	10V	OPEN
Percentage of rated current	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	95%~108%

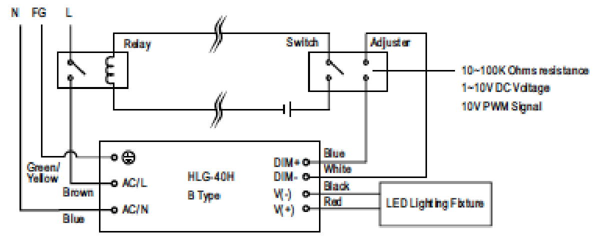
※ 10V PWM signal for output current adjustment (Typical): Frequency range :100Hz ~ 3KHz

Duty value	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	OPEN
Percentage of rated current	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	95%~108%

※Using the built-in dimming function on B-type model can't turn the lighting fixture totally dark. Please refer to the connection method below to achieve 0% brightness of the lighting fixture connecting to the LED power supply unit.

※Direct connecting to LEDs is suggested, but is not suitable for using additional drivers.

Dimming connection diagram for turning the lighting fixture ON/OFF :

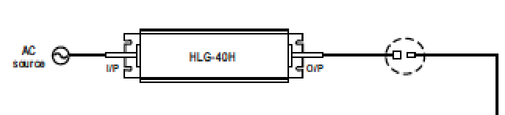


Using a switch and relay can turn ON/OFF the lighting fixture.
1.Output constant current level can be adjusted through output cable by connecting a resistance or 1~10Vdc or 10V PWM signal between DIM+ and DIM-.
2.The LED lighting fixture can be turned ON/OFF by the switch.

WATERPROOF CONNECTION

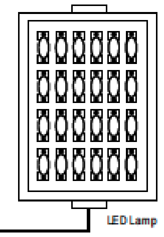
◎ Waterproof connector

Waterproof connector can be assembled on the output cable of HLG-40H to operate in dry/wet/damp or outdoor environment.

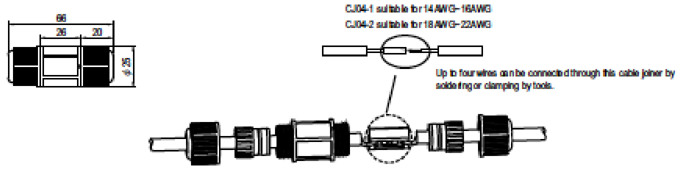


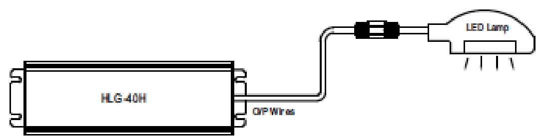
Size	Pin Configuration (Female)	
M12	4-PIN	5-PIN
	5A/PIN	5A/PIN
Order No.	M12-04	M12-05
Suitable Current	10A max.	10A max.

Size	Pin Configuration (Female)
M15	2-PIN
	12A/PIN
Order No.	M15-02
Suitable Current	12A max.

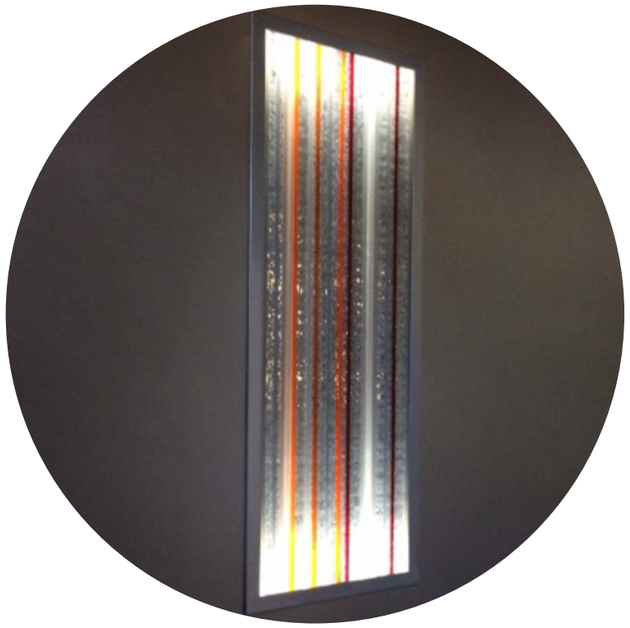


◎ Cable Joiner





※CJ04 cable joiner can be purchased independently for user's own assembly.
MEAN WELL order No. :CJ04-1, CJ04-2.



COMPLETED AND INSTALLED ARTWORK