

THORN

Graffiti

Aesthetical spotlight range
with innovative beam
angle adjustment



Freedom and Flexibility

Spotlighting or accent lighting can be viewed as the tool for 'painting' displays with light

Directed light can be used for creating stimulating and eye-catching effects. Generally there are several aims in accent lighting, firstly to make the set-up stand out from the general light and secondly to guide the customer's eye.

Different directions of light can have a big impact on the perception of an object. One can create different moods and perceptions just by redirecting the light - see the Lighting effects section on page 4 for examples.

In retail applications, shop windows need to grab the attention of passers by. The window display is an exhibition of the brand - a way for companies to display their identity. Spotlighting is a crucial element in getting the right image.

Artefacts, artwork and objects of interest can also benefit from directional light to emphasise key features.

An effective and interesting accent light has to be created on site. With the new Graffiti range the task of 'painting' with light is made easy for the scene creator, thanks to the stepless* adjustable beam angles, which ensure an optimal cone of light for every single need!

Colour filters, barndoors and louvres further extend the flexibility of this range, which in turn enhances the control you have in designing an attractive display. DSI controllable Phase dimmers enable you to integrate the Graffiti range into projects where Indoor Lighting Controls are used. In this way Graffiti can now be part of exciting different and changing scenarios or can be daylight-linked to contribute to the saving of energy by central control of the whole track.

*Stepless - Freedom and flexibility in selection of beam angle.



Easy beam angle adjustment



Lighting effects

When illuminating items in a display a variety of beam and lighting angles can be combined to give the desired effect. With attachments and colour filters the amount of control you have is endless.



Normal lighting

The choice of beam angle (thereby light intensity and area covered by light) combined with the choice of lamp type can have a major influence on the appearance and perception of the illuminated object. By default there are a few rules of thumb, but 'painting' the set with light with the use of imagination and re-aiming from different spot locations normally gives the best result. Remember that not only are the objects lit but also the light awakens the customer's interest. The brand of the store or the goods can be built and strengthened by excellent lighting.

In these pictures the impact of different spotlight locations and beam angles is clearly shown. Thanks to Graffiti's 'stepless' beam angle adjustment, one can fine tune or change the appearance with ease. A strong, intense side light could be changed into a medium or soft - just by the twist of the back section of the spotlight!

Lighting from the front or multiple directions - 'Normal light'

The most common solution even though it is rarely the best. Flattens all textures and facial irregularities giving a dull impression that lacks eye-catching appearance.

Light from the top

Gives a more natural appearance as we are used to seeing things being lit by the sun. Medium texture visibility and natural shadow play.

Light from below

This solution should be used with caution as it can create a strange impression, very unnatural but with great eye-catching effects. Great texture visibility and spooky shadowing.



Light from the top



Light from below



Strong light from the side



Medium light from the side

Users can control the lighting to match their needs

Side lighting

Three examples of light coming from the side. In the first example the light is hard and direct giving extra life to the object and showing textures if present. This can easily appear too harsh or unfriendly.

The third example has a softer sidelight giving a more natural but less dramatic perception. Textures are more suppressed and shadows are less defined.

Combinations

Every case is different and each shape really needs its own combination of light directions. Try to redirect, redirect and redirect until the best solution is found!

Textures always benefit from a narrow, hard light introduced at a low angle. Light from the front of a texture (in line with the viewer) will always flatten the structures and reduce shadowing.



1

A picture space could for example, be easily reconfigured when the need arises.

The small painting (1) is replaced by a larger one. A wider beam is now needed to prevent dark corners (2) and to give uniform lighting - this is easily achieved by a simple twist of the back section of Graffiti M and L (3).



Soft light from the side



2



3

Lighting effects

Colour filters

Colour filters can add effects to the set, but they must be used with care, as over flooding your scene with colour can distort the colours you wish to preserve.

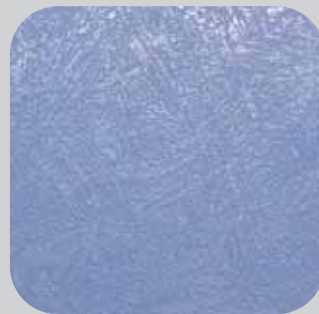


Illumination of texture

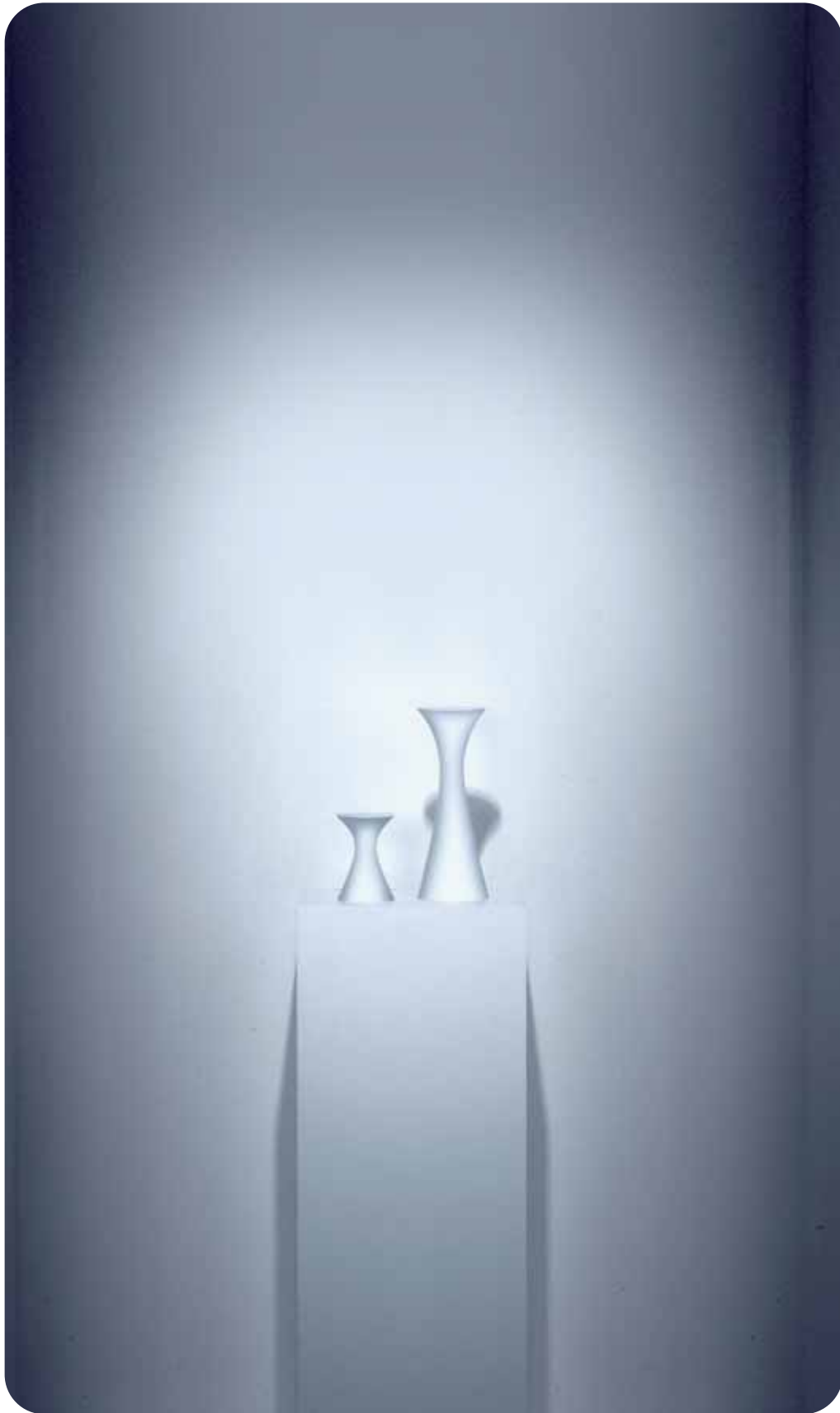
Notice the effects of direction. Shown left is the clear directional quality of spotlighting - the fabric reveals its texture, while to the right directional effects are virtually absent.



Fabric illuminated at a low angle



Same fabric illuminated from the front



Beam angle

A combination of beam angle optimisation and barn doors can reduce 'light spill' and cuts off the light in undesired areas.



Introduction to the Graffiti Range



The Graffiti range has been carefully designed with discreet simplicity. Graffiti not only looks refined but each design detail fulfils a technical requirement.

- Graffiti is available in three versions, Small, Medium and Large. A wide range of lamps and wattages are also available to suit your application.
- Each member of the range has a surface or track mounting solution (L surface version available to order only)
- The pure and simple shape of Graffiti is reflected through all sizes creating a consistent design theme throughout the range. The unobtrusive design features complement all environments and integrate well with a variety of architectural styles.
- High quality range constructed from durable die-cast aluminium
- High grade spun, anodised aluminium reflectors house innovative stepless adjustable beam angles 10°-35° (narrow) and 25°-55° (wide, except version S)
- Sturdy metal stem in metallic finish
- The optimised control of light and high levels of flexibility make Graffiti the perfect choice for ever changing displays
- Silver reflectors as standard, gold finish available to order
- Easy to install user-focused attachments with simple bayonet function
- Graffiti can be used to enhance both the lit and aesthetic environment in a variety of retail and leisure applications like shops and museums
- Some versions of the Graffiti range (depending on the lamp) can be dimmed via DSI signals or momentary action switches, using DSI controllable Phase dimmers (available as accessories) providing central control for the whole track.

Materials/Finish

Body: die-cast aluminium wet painted white (close to RAL 9016) or silver/grey (RAL 9007)
Reflector: spun high grade anodised aluminium silver finish as standard, gold available on request. Reflectors have facets that mix the light rays to ensure a uniform colour temperature within the light beam
Stem: steel with high friction joint, silver finish
Protective front glass for M and L versions.

Installation/Mounting

Suitable for 3 circuit multiadaptor (1 circuit France only) or surface mounting.
3 x 2 x 2.5mm² piano key terminal block and 10mm cable entry in the back and sides as break out for surface mounted versions.
Graffiti S uses a screw terminal 2 x 1.5mm without looping possibilities.
Rotation 0° - 360°
Tilt 0° - 90°
Attachments easily mounted by tool-free bayonet function.

Spotlights can be supplied with lamps to order.
Track mounting: mechanical and electrical track connection is made using the track adaptor, which locates quickly and positively to the track via two stable clamping points with a simple clockwise turn of the fixing lever. Select the desired circuit (1, 2 or 3) using the selector on the top of the trackbox before installing onto the track.

Standards

Designed and manufactured to comply with EN60598.
⊕ Class I Electrical
850°C fire retardant
IK02 IP20



Graffiti S

Small spotlights for PAR and QR Tungsten halogen lamps with fixed beam angles. Careful lamp selection provides various alternative beam characteristics.

- Surface mounting or 3 circuit track (Multi adaptor). (1 circuit adaptors for France only)
- Mains and low voltage versions available. Low voltage versions have an integral electronic transformer in adaptor or surface plate
- DSI or momentary action switch controllable Phase dimmers (40-500VA and 40-1000VA) are sold separately and can be used for all versions of Graffiti S as central control of the whole track.

Lamps

- 50-100W, PAR 20/30 (HEG-PAR) halogen. Cap: E27
- 35-50W, PAR16 (HR) halogen. Cap: GZ10
- 35-50W, QR-CBC (HRG) halogen. Cap: GU5.3

Specification

To specify state:
Small spotlight for 50-100W PAR 20/30/35-50W PAR 16/35-50W QR-CBC, halogen lamps.
As Thorn Graffiti S.



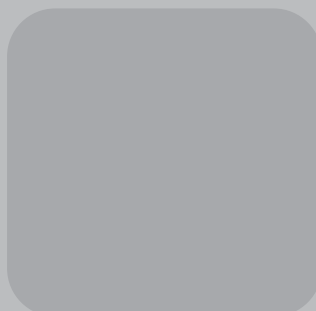
QR-CBC white



PAR 20 Silver/grey, surface mounted



PAR 30 White, track mounted



Graffiti M

Medium spotlight with two different reflector options, narrow or wide, and stepless adjustable beam angles

- Stepless adjustable beam angles for QT12 and HIT-TC versions
- Surface mounting or 3 circuit track (Multi adaptor)
- Wide choice of Tungsten halogen or metal halide lamps
- Mains and low voltage versions available
- DSI or momentary action switch controllable Phase dimmers (40-500VA and 40-1000VA) are sold separately and can be used for the QT12 and QR111 versions of Graffiti M as central control of the whole track.

Lamps

- ⇒ 50-100W, QT12 (HSG) halogen. Cap: GY6.35
- ⇐ 35-70W, HIT-TC-CE (MT) metal halide. Cap: G8.5
- ⊕ 50-100W QR111 (HMG) halogen. Cap: G53
- ⊕ 35-70W HIPAR111 (MR) metal halide. Cap: GX8.5

Specification

To specify state:
Medium spotlight for 50-100W QT12/ 50-100W QR111 halogen lamps, 35-70W HIT-TC/35-70W HIPAR111 metal halide lamps.
As Thorn Graffiti M.



Silver/grey surface mounted



White track mounted



Graffiti L

High power spotlight with two different reflector options, narrow or wide, and stepless adjustable beam angles

- Stepless adjustable beam angles
- Surface or 3 circuit track (Multi adaptor)

Lamps

☛ 50-100W, HST (STH) White SON. Cap: GX12

☛ 150W, HIT-CE (MT) metal halide. Cap: G12

Specification

To specify state:

High power spotlight for 50-100W HST White SON and 150W HIT-CE metal halide lamps.

As Thorn Graffiti L.



Silver/grey, track mounted



Accessories

Food lighting is an excellent example where spotlighting can be of benefit

However if not used with care it can have a destructive effect both physically and aesthetically as Infra Red and Ultra Violet rays can have a damaging effect. Combining Graffiti with IR/UV filters can reduce this risk as they can keep goods cool by protecting them from hot infra red and bleaching ultra violet rays.

Additionally combining a food filter with an HIT lamp can intensify the colour of the goods, giving them a warm glow. You can also use a gold reflector to bring out the intensity of colour in all warm coloured food, for example bread, roasts and cheese.

When using colour filters there is a difference between desirable and undesirable colours. If not used with care goods can become over saturated with colour creating an unnatural appearance.

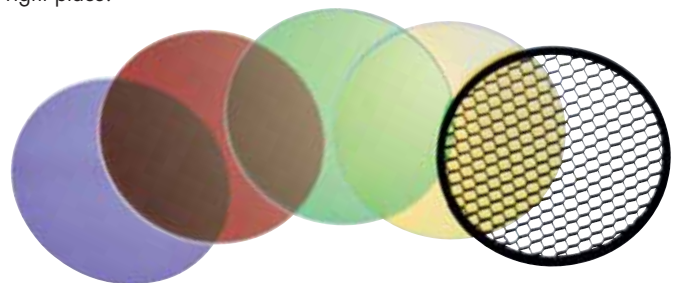
The lighting of fabrics and garments works in a similar way to food. Materials are still sensitive to IR and UV rays, but one differentiator is that artificial light distorting the 'true' colour might mislead the customer. For example when that beautiful 'Bordeaux' coloured dress turns out to be brown in the sunlight!

If you don't want to 'spray paint' the surrounding area with light and optimised control of light is what you need, then use a barn door attachment or louvre to fine-tune your lighting display.

When using a selection of different colour filters side by side, it is possible to create an undesired colour in the transition area. Using a barn door attachment can effectively cut off light at the right place.



Barn doors



Lamp	Metal halide	White SON	White SON	White SON
Reflector	Silver	Silver	Silver	Gold
Filter	IR/UV	IR/UV	Food	Gold IR/UV
Food				
Cheese		•		•
Grilled*				•
Red fish		•	•	
White fish	•			
Meat			•	
Sausage			•	
Fruits	•			•
Bakeries	•			•

*No filter

Illumination should not exceed 2 x general lighting levels



Gold reflector available on request

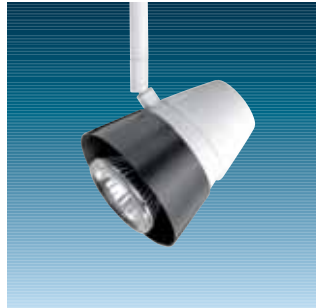


Louvre attachment

Ordering Guides & Dimensions



Graffiti S, PAR 16 White



Graffiti S, PAR 20 White



Graffiti S, PAR 30 White



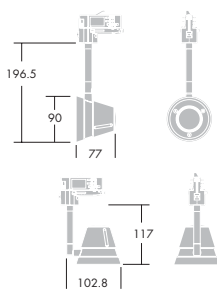
Graffiti S, PAR 16 Silver/grey



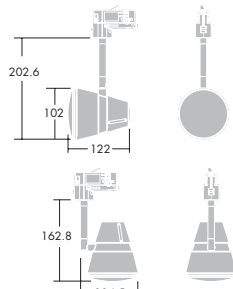
Graffiti S, PAR 20 Silver/grey



Graffiti S, PAR 30 Silver/grey



Surface/Track version PAR 16 and QR-CBC



Surface/Track version PAR 20/30

Graffiti S Ordering Guide Lamps to be ordered separately
All versions have a fixed lamp position

Description	Icos Code	Socket	Weight (Kg)	SAP Code white	SAP Code silver/grey
Graffiti S - Surface mounted					
GRAFFITI S 1X75W PAR30 MSF	HEG-PAR	E27	0.5	96106670	96106678
GRAFFITI S 1X50W PAR16 GZ10 MSF	HR	GZ10	0.5	96106671	96106679
Graffiti S - Single circuit track mounted (France only)					
GRAFFITI S 1X75W PAR30 MT1	HEG-PAR	E27	0.5	96106672	96106680
GRAFFITI S 1X50W PAR16 GZ10 MT1	HR	GZ10	0.5	96106673	96106681
GRAFFITI S 1X50W QR-CBC MT1*	HRG	GU5.3	0.2	96106674	96106682
Graffiti S - Three-circuit track mounted					
GRAFFITI S 1X75W PAR30 MT3	HEG-PAR	E27	0.5	96106675	96106683
GRAFFITI S 1X50W PAR16 GZ10 MT3	HR	GZ10	0.5	96106676	96106684
GRAFFITI S 1X50W QR-CBC MT3*	HRG	GU5.3	0.3	96106677	96106685

*Integral electronic transformer

Accessories

Description	Weight (Kg)	SAP Code
DSI phase or reverse phase dimmer, auto load detection, 40-500VA and 40-1000VA		
PDAX 500VA	0.2	22154307
PDAS 1000VA	0.4	22154306

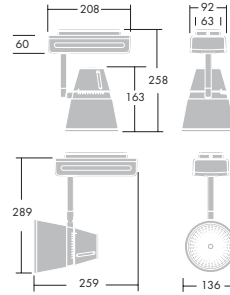
PDAX - mounted behind recessed ceilings, PDAS - mounted in cabinet



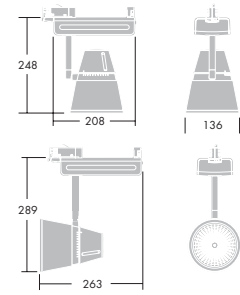
Graffiti M, White



Graffiti M, Silver/grey



Surface version



Track version

Graffiti M Ordering Guide Lamps to be ordered separately

Description	Ilcos Code	Socket	Weight (Kg)	SAP Code white	SAP Code silver/grey
Graffiti M - Surface mounted fixed beam					
GRAFFITI M 1X100W QR111 MSF*	HMG	G53	1.4	96106694	96106705
GRAFFITI M 1X35W HIPAR111 GX8,5 MSF	MR	GX8.5	1.4	96106695	96106706
GRAFFITI M 1X70W HIPAR111 GX8,5 MSF	MR	GX8.5	1.4	96106696	96106707
Graffiti M - Surface mounted - narrow beam					
GRAFFITI M 1X90W QT12 MSF SP***	HSG	GY6.35	1.4	96106686	96106697
GRAFFITI M 1X20W HIT-TC G8,5 MSF SP**	MT	G8.5	1.4	96106688	96106699
GRAFFITI M 1X35W HIT-TC G8,5 MSF SP**	MT	G8.5	1.4	96106690	96106701
GRAFFITI M 1X70W HIT-TC G8,5 MSF SP**	MT	G8.5	1.4	96106692	96106703
Graffiti M - Surface mounted - wide beam					
GRAFFITI M 1X90W QT12 MSF FL***	HSG	GY6.35	1.4	96106687	96106698
GRAFFITI M 1X20W HIT G8,5 MSF FL**	MT	G8.5	1.4	96106689	96106700
GRAFFITI M 1X35W HIT G8,5 MSF FL**	MT	G8.5	1.4	96106691	96106702
GRAFFITI M 1X70W HIT G8,5 MSF FL**	MT	G8.5	1.4	96106693	96106704
Graffiti M - Three-circuit track mounted fixed beam					
GRAFFITI M 1X100W QR111 MT3*	HMG	G53	1.3	96106716	96106727
GRAFFITI M 1X35W HIPAR111 GX8,5 MT3	MR	GX8.5	1.3	96106717	96106728
GRAFFITI M 1X70W HIPAR111 GX8,5 MT3	MR	GX8.5	1.3	96106718	96106729
Graffiti M - Three-circuit track mounted - narrow beam					
GRAFFITI M 1X90W QT12 MT3 SP***	HSG	GY6.35	1.3	96106708	96106719
GRAFFITI M 1X20W HIT-TC G8,5 MT3 SP**	MT	G8.5	1.3	96106710	96106721
GRAFFITI M 1X35W HIT-TC G8,5 MT3 SP**	MT	G8.5	1.3	96106712	96106723
GRAFFITI M 1X70W HIT-TC G8,5 MT3 SP**	MT	G8.5	1.3	96106714	96106725
Graffiti M - Three-circuit track mounted - wide beam					
GRAFFITI M 1X90W QT12 MT3 FL***	HSG	GY6.35	1.3	96106709	96106720
GRAFFITI M 1X20W HIT-TC G8,5 MT3 FL**	MT	G8.5	1.3	96106711	96106722
GRAFFITI M 1X35W HIT-TC G8,5 MT3 FL**	MT	G8.5	1.3	96106713	96106724
GRAFFITI M 1X70W HIT-TC G8,5 MT3 FL**	MT	G8.5	1.3	96106715	96106726

*Integral electronic transformer

**Stepless adjustable version

*** Integral electronic transformer and stepless adjustable version

Attachments

Description	Weight (Kg)	SAP Code
GRAFFITI M FILTER RED	0.1	96106742
GRAFFITI M FILTER BLU	0.1	96106743
GRAFFITI M FILTER GRN	0.1	96106744
GRAFFITI M FILTER YEL	0.1	96106745
GRAFFITI M FILTER IR/UVA	0.1	96106746
GRAFFITI M FILTER FOOD	0.1	96106747
GRAFFITI M LV BLK	0.1	96106748
GRAFFITI M BARN DOOR BLK	0.2	96106749

IR/UVA - Integrated IR and UV filter, LV - Louvre

Accessories for QT12 and QR111 versions

Description	Weight (Kg)	SAP Code
DSI phase or reverse phase dimmer, auto load detection, 40-500VA and 40-1000VA		
PDAX 500VA	0.2	22154307
PDAS 1000VA	0.4	22154306

PDAX - mounted behind recessed ceilings, PDAS - mounted in cabinet

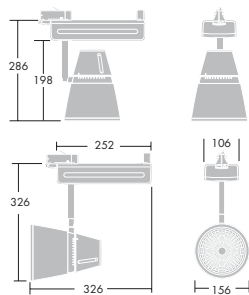
Ordering Guides & Dimensions



Graffiti L, White



Graffiti L, Silver/grey



Graffiti L Ordering Guide

Lamps to be ordered separately

Description	Ilcos Code	Socket	Weight (Kg)	SAP Code white	SAP Code silver/grey
Graffiti L - Three-circuit track mounted - narrow beam					
GRAFFITI L 1X150W HIT G12 MT3 SP**	MT	G12	1.8	96106730	96106736
GRAFFITI L 1X50W HST GX12 MT3 SP**	STH	GX12	1.7	96106732	96106738
GRAFFITI L 1X100W HST GX12 MT3 SP**	STH	GX12	1.7	96106734	96106740
Graffiti L - Three-circuit track mounted - wide beam - white					
GRAFFITI L 1X150W HIT G12 MT3 FL**	MT	G12	1.8	96106731	96106737
GRAFFITI L 1X50W HST GX12 MT3 FL**	STH	GX12	1.7	96106733	96106739
GRAFFITI L 1X100W HST GX12 MT3 FL**	STH	GX12	1.7	96106735	96106741

**Stepless adjustable version

Attachments

Description	Weight (Kg)	SAP Code
GRAFFITI L FILTER RED	0.1	96106750
GRAFFITI L FILTER BLU	0.1	96106751
GRAFFITI L FILTER GRN	0.1	96106752
GRAFFITI L FILTER YEL	0.1	96106753
GRAFFITI L FILTER IR/UVA	0.1	96106754
GRAFFITI L FILTER FOOD	0.1	96106755
GRAFFITI L LV BLK	0.1	96106756
GRAFFITI L BARN DOOR BLK	0.3	96106757

IR/UVA - Integrated IR and UV filter, LV - Louvre



Photometric Data

Stepless light distributions with a simple twist of the back section of the spotlight

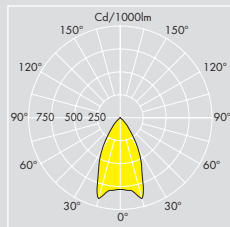
Cone diagrams are convenient for comparing alternative spotlights, but it is important not to mistake the 'cone' for a cut-off line. The sides of the 'cone' and the angle quoted show the 'pencil' across which the beam intensity is within 50% of its maximum value. The cone diagram also shows the maximum direct illuminance E at various distances from the spotlight.

Graffiti Medium, wide beam (QT12 lamp)

Mounting height	Average Illuminance	Beam diameter
1.0	1058lx	1.06
2.0	265lx	2.11
3.0	118lx	3.17
4.0	66lx	4.22

φ1800lm Half beam - 2x28° LOR: 0.76

Graffiti medium, wide beam, position 1
Lamp: 1x90W QT12



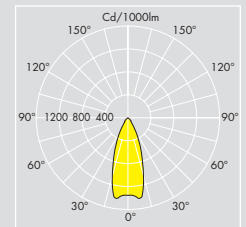
Graffiti medium, wide beam, position 1
Lamp: 1x90W QT12
DLOR: 0.76 LOR: 0.76

Graffiti Medium, narrow beam (QT12 lamp)

Mounting height	Average Illuminance	Beam diameter
1.0	1812lx	0.73
2.0	453lx	1.46
3.0	201lx	2.20
4.0	113lx	2.93

φ1800lm Half beam - 2x20° LOR: 0.76

Graffiti medium, narrow beam, position 1
Lamp: 1x90W QT12

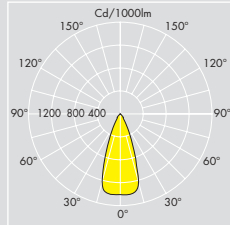


Graffiti medium, narrow beam, position 1
Lamp: 1x90W QT12
DLOR: 0.76 LOR: 0.76

Mounting height	Average Illuminance	Beam diameter
1.0	1925lx	0.74
2.0	481lx	1.48
3.0	214lx	2.21
4.0	120lx	2.95

φ6600lm Half beam - 2x20° LOR: 0.72

Graffiti medium, wide beam, position 2
Lamp: 1x90W QT12

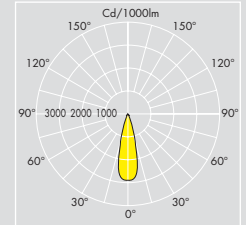


Graffiti medium, wide beam, position 2
Lamp: 1x90W QT12
DLOR: 0.72 LOR: 0.72

Mounting height	Average Illuminance	Beam diameter
1.0	3949lx	0.50
2.0	987lx	1.00
3.0	439lx	1.50
4.0	247lx	2.00

φ6600lm Half beam - 2x14° LOR: 0.76

Graffiti medium, narrow beam, position 2
Lamp: 1x90W QT12

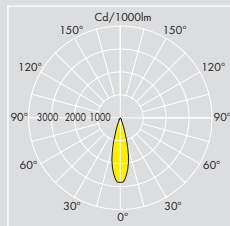


Graffiti medium, narrow beam, position 2
Lamp: 1x90W QT12
DLOR: 0.76 LOR: 0.76

Mounting height	Average Illuminance	Beam diameter
1.0	3618lx	0.49
2.0	904lx	0.98
3.0	402lx	1.47
4.0	226lx	1.96

φ1800lm Half beam - 2x14° LOR: 0.70

Graffiti medium, wide beam, position 3
Lamp: 1x90W QT12

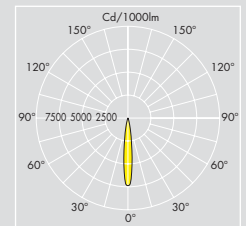


Graffiti medium, wide beam, position 3
Lamp: 1x90W QT12
DLOR: 0.70 LOR: 0.70

Mounting height	Average Illuminance	Beam diameter
1.0	9579lx	0.24
2.0	2395lx	0.48
3.0	1064lx	0.72
4.0	599lx	0.96

φ1800lm Half beam - 2x7° LOR: 0.68

Graffiti medium, narrow beam, position 3
Lamp: 1x90W QT12



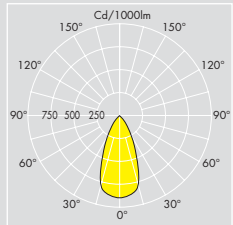
Graffiti medium, narrow beam, position 3
Lamp: 1x90W QT12
DLOR: 0.68 LOR: 0.68

Graffiti Medium, wide beam (HIT lamp)

Graffiti Medium, narrow beam (HIT lamp)

Mounting height	Average Illuminance	Beam diameter
1.0	4070lx	0.88
2.0	1081lx	1.75
3.0	452lx	2.63
4.0	254lx	3.51

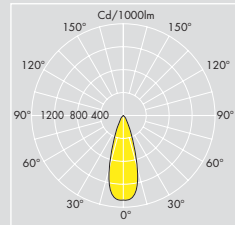
φ6600lm Half beam - 2x24° LOR: 0.62



Graffiti medium, wide beam, position 1
Lamp: 1x70W HIT-TC-CE
DLOR: 0.62 LOR: 0.62

Mounting height	Average Illuminance	Beam diameter
1.0	7088lx	0.62
2.0	1772lx	1.24
3.0	788lx	1.86
4.0	443lx	2.48

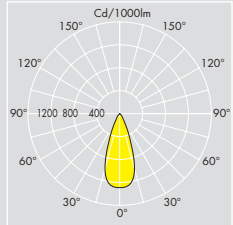
φ6600lm Half beam - 2x17° LOR: 0.61



Graffiti medium, narrow beam, position 1
Lamp: 1x70W HIT-TC-CE
DLOR: 0.61 LOR: 0.61

Mounting height	Average Illuminance	Beam diameter
1.0	6156lx	0.72
2.0	1539lx	1.43
3.0	684lx	2.15
4.0	385lx	2.86

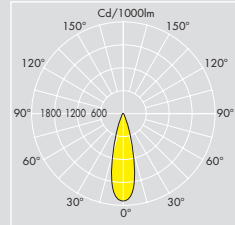
φ6600lm Half beam - 2x20° LOR: 0.61



Graffiti medium, wide beam, position 2
Lamp: 1x70W HIT-TC-CE
DLOR: 0.61 LOR: 0.61

Mounting height	Average Illuminance	Beam diameter
2.0	2741lx	0.99
4.0	685lx	1.99
6.0	305lx	2.98
8.0	171lx	3.97

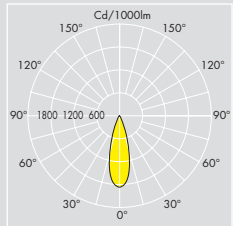
φ6600lm Half beam - 2x14° LOR: 0.60



Graffiti medium, narrow beam, position 2
Lamp: 1x70W HIT-TC-CE
DLOR: 0.60 LOR: 0.60

Mounting height	Average Illuminance	Beam diameter
1.0	8710lx	0.55
2.0	2178lx	1.10
3.0	968lx	1.64
4.0	544lx	2.19

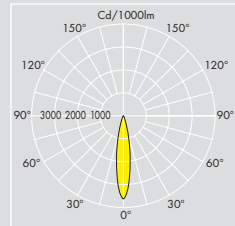
φ6600lm Half beam - 2x15° LOR: 0.56



Graffiti medium, wide beam, position 3
Lamp: 1x70W HIT-TC-CE
DLOR: 0.56 LOR: 0.56

Mounting height	Average Illuminance	Beam diameter
2.0	4085lx	0.66
4.0	1021lx	1.33
6.0	454lx	1.99
8.0	255lx	2.66

φ6600lm Half beam - 2x9° LOR: 0.55



Graffiti medium, narrow beam, position 3
Lamp: 1x70W HIT-TC-CE
DLOR: 0.55 LOR: 0.55

THORN

Lighting people and places

Thorn Lighting Main Offices

Head Office

Thorn Lighting Holdings Limited,
Silver Screens, Elstree Way, Borehamwood,
Hertfordshire, WD6 1FE, UK
Tel: (44) 20 8732 9800
Fax: (44) 20 8732 9801
E-mail: info@thornlight.com
Website: www.thornlighting.com

Australia

Thorn Lighting Pty Limited, 13 Cooper Street,
P O Box 188, Smithfield, NSW 2164, Australia
Tel: (61) 2 9604 4300
Fax: (61) 2 9604 4588
E-mail: info@thornlight.com.au
Website: www.thornlight.com.au

Thorn DNT Airfield Lighting Pty Limited, P O Box 548,
Unit 2, 7-9 Newcastle Road, Bayswater, Melbourne,
Victoria 3153, Australia
Tel: (61) 3 9720 3233
Fax: (61) 3 9720 8233
E-mail: enquiries@thornlight.com.au
Website: www.thornairfield.com

Austria

Thorn Licht GmbH, Donau-City-Straße 11,
1220 Wien, Austria
Tel: (43) 1 202 66 11
Fax: (43) 1 202 66 11 12
E-mail: office@thorn.at

China

Thorn Lighting (Guangzhou) Operations Ltd.
No. 12 Lian Yun Road
Eastern Section, GETDD,
Guangzhou 510760,
China
Tel: (86) 20 3228 2706
Fax: (86) 20 3228 1777
E-mail: sales@thorn.com.cn

Thorn Lighting (Tianjin) Co. Ltd.
332 Hongqi Road,
Tianjin 300190,
China
Tel: (86) 22 8369 2303
Fax: (86) 22 8369 2302
E-mail: marketing@thornlight.com.cn

Czech Republic

Thorn Lighting CS spol. s.r.o., Na Březince 6/930,
150 00 Praha 5
Tel: +420 224 315 252
Fax: +420 233 326 313
E-mail: thorn@thornlight.cz
Website: www.thornlight.cz

Denmark

Thorn Lighting A/S
Albuen 44, 6000 Kolding, Denmark
Tel: (45) 7696 3600
Fax: (45) 7696 3601
Website: www.thornlight.dk

Estonia

Thorn Lighting, Eesti Filiaal,
Tatari 23/25, EE-10116 Tallin, Estonia
Tel: (372) 656 3505
Fax: (372) 656 3227
E-mail: ando@thorn.ee

France

Thorn Europhane SA, 156 Boulevard Haussmann,
Cedex 08, Paris 75379, France
Tel: (33) 1 49 53 6262
Fax: (33) 1 49 53 6240
Website: www.thorn.fr
Thorn Airfield Lighting, 156 Boulevard Haussmann,
75379 Paris Cedex 08, France
Tel: (33) 1 49 53 62 62
Fax: (33) 1 49 53 62 89
E-mail: thornairfield@thorn.fr
Website: www.thornairfield.com

Hong Kong

Thorn Lighting (Hong Kong) Limited,
Unit 4301, Level 43, Tower 1, Metroplaza,
223 Hing Fong Road, Kwai Chung, N.T.,
Hong Kong,
China
Tel: (852) 2578 4303
Fax: (852) 2887 0247
E-mail: info@thorn.com.hk
Website: www.thorn.com.hk

Ireland

Thorn Lighting (Ireland) Limited,
320 Harold's Cross Road, Dublin 6W, Ireland
Tel: (353) 1 4922 877
Fax: (353) 1 4922 724
E-mail: enq.dublin@thornlight.com

Italy

Thorn Europhane Spa, Via G Di Vittorio, 2,
Cadrano di Granarolo, Bologna 40057, Italy
Tel: (39) 051 763391
Fax: (39) 051 763088
E-mail: info@thornlighting.it
Website: www.thornlighting.it

Latvia

Thorn Lighting, Representative Office,
Skolas Street 21-216, Riga LV 1010, Latvia
Tel: (37) 7 332 660
Fax: (37) 7 332 660

Lithuania

Thorn Lighting, Representative Office,
Kalvariju Street 1, Vilnius 09310, Lithuania
Tel: (370) 5 2 750 701
Fax: (370) 5 2 731 480

New Zealand

Thorn Lighting (NZ) Ltd, 399 Rosebank Road,
P O Box 71134, Rosebank, Auckland 7, New Zealand
Tel: (64) 9 828 7155
Fax: (64) 9 828 7591

Norway

Thorn Lighting AS, Industriveien 11, P O Box 63,
Skytta 1483, Norway
Tel: (47) 6706 2233
Fax: (47) 6706 0351
E-mail: s.kvernberg@thornlight.no

Poland

Thorn Lighting Polska Sp.z o.o., Ul. Gazowa 26A,
Wroclaw 50-513, Poland
Tel: (48) 71 7833 740
Fax: (48) 71 3366 029
E-mail: thorn@thornlight.pl
Website: www.thornlight.pl

Russia

Thorn Lighting, Novoslobodskaya Str., 21,
office 406 Business Center "Novoslobodskaya 21",
Moscow 103030, Russia
Tel: (7) 495 981 35 41
Fax: (7) 495 981 35 42
E-mail: office.moscow@thorn.ru
Website: www.thorn.ru

Thorn Lighting, Representative Office, Europa House,
1 Artilleriiskaya, St Petersburg 191104, Russia
Tel: (7) 812 718 8112
Fax: (7) 812 718 8119
E-mail: office.petersburg@thorn.ru
Website: www.thorn.ru

Singapore

Thorn Lighting (Singapore) Pte Ltd,
5 Kaki Bukit Crescent
04-02 Koyotech Building,
416238 Singapore
Singapore
Tel: (65) 6844 5800
Fax: (65) 6745 7707
E-mail: info@thornlight.com.sg
Website: www.thornlight.com.sg

Sweden

Thorn Lighting AB, Industrigatan, Box 305,
SE-261 23 Landskrona, Sweden
Tel: (46) 418 520 00
Fax: (46) 418 265 74
E-mail: thorn@thornlight.se
Website: www.thornlight.se

United Arab Emirates

Thorn Lighting Ltd Dubai, Al Shoala Building, Office 301,
Block E, PO Box 1200, Deira, Dubai, UAE
Tel: (971) 4 2940181
Fax: (971) 4 2948838
E-mail: thuae@emirates.net.ae

Thorn Gulf LLC, Al Shoala Building, Office 301/2,
Block E, PO Box 1200, Deira, Dubai, UAE
Tel: (971) 4 2948938
Fax: (971) 4 2948838
E-mail: thornng@emirates.net.ae

United Kingdom

Thorn Lighting Limited, Silver Screens, Elstree Way,
Borehamwood, Hertfordshire, WD6 1FE, UK
Tel: (44) 20 8732 9800
Fax: (44) 20 8732 9801
E-mail: brochures@thornlight.com
Website: www.thornlighting.co.uk

Thorn Airfield Lighting, Silver Screens, Elstree Way,
Borehamwood, Hertfordshire, WD6 1FE, UK
Tel: (44) 20 8732 9804
Fax: (44) 20 8732 9803
E-mail: airfield@thornlight.com or thornagluk@aol.com
Website: www.thornairfield.com

International Sales

Thorn Lighting Limited, 156 Boulevard Haussmann,
Cedex 08, Paris 75379, France
Tel: (33) 1 49 53 6262
Fax: (33) 1 49 53 6240

Thorn Lighting Limited, Silver Screens, Elstree Way,
Borehamwood, Hertfordshire, WD6 1FE, UK
Tel: (44) 20 8732 9802
Fax: (44) 20 8732 9803
E-mail: international.sales@thornlight.com

www.thornlighting.com

Thorn Lighting is constantly developing and improving its products. All descriptions, illustrations, drawings and specifications in this publication present only general particulars and shall not form part of any contract. The right is reserved to change specifications without prior notification or public announcement. All goods supplied by the company are supplied subject to the company's General Conditions of Sale, a copy of which is available on request. All measurements are in millimetres and weights in kilograms unless otherwise stated.

Publication No: 371 (INT) Publication Date: 07/06