LAZER

HIGH PERFORMANCE LIGHTING

5000 KELVIN

IP67 WATERPROOF

5 YEAR WARRANTY

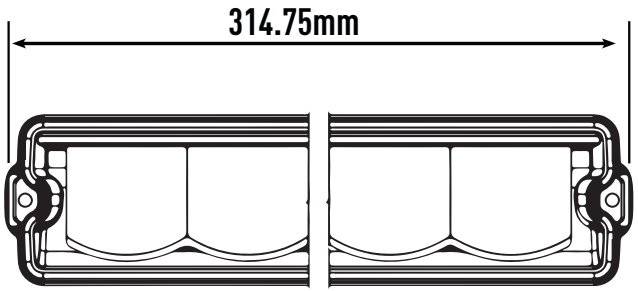
SEE MORE GO FASTER GO SAFER

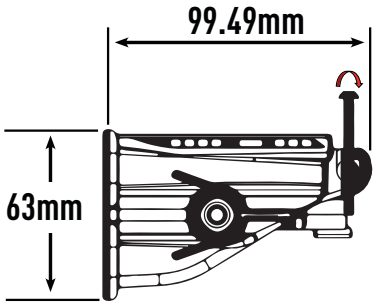
MADE IN THE UK /LAZERLAMPS

CARBON SERIES

THE 3RD GENERATION OF LAZER LAMPS' ULTRA-LIGHTWEIGHT MOTORSPORT LIGHTING SOLUTIONS SEES THE RE-DESIGN AND RE-ENGINEERING OF OUR CARBON-6 LED DRIVING LIGHTS TO DELIVER MORE LIGHT, LESS WEIGHT, AND GREATER FUNCTIONALITY. AVAILABLE AS 'SPOT' OR 'WIDE' BEAM PATTERN, EACH LIGHT CAN OPERATE IN FULL BEAM MODE, OR IN A SECONDARY 'FOG' BEAM MODE. ADDITIONAL LIGHTING MODES ARE PERMISSABLE WHERE VARIABLE PWM INPUT SIGNALS AS ACHIEVABLE.

Advances in electronic design and component technologies, has allowed us to increase the light output through placing additional LEDs on the lamp's circuit board. Ultra-reflective vacuum-metallised optics harness the maximum light output for the road and track ahead. The lamp housing is constructed from high-strength and heat-resistant PC-ABS material. Thermal control of the lamp is managed through a CAE-optimised anodised aluminium element, meticulously engineered to maintain full and optimal lighting performance of the LEDs, while minimising weight. Dynamic drive modulation within the lamps, prevents damage to the electronic components in more extreme environmental and thermal conditions. The Carbon-6 lamps have been designed alongside a range of carbon-fibre rally pods, compatible across a wide range of vehicle makes and models. Pod adjustment and fine-tuning elements, alongside compatible lens cover options, ensures a superior rally lighting solution.





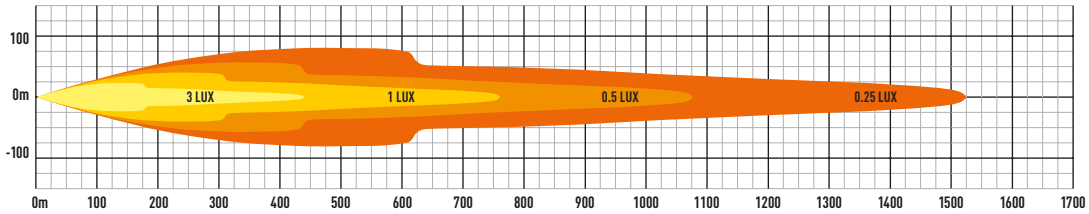
FINE TUNING ADJUSTMENT
1 turn = 0.83 degrees of up/down adjustment.

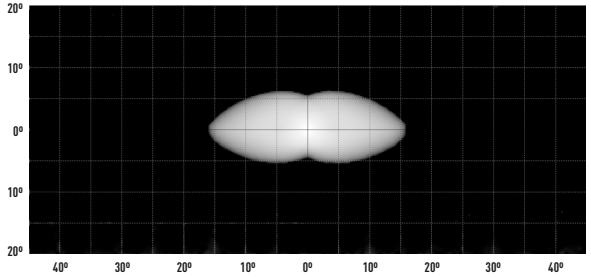
CARBON-6
SPOT

VOLTAGE RANGE	10V - 32V
RAW LUMENS (E-BOOST / FOG)	9,360 / 9,360 (TOTAL: 18720)
EFFECTIVE LUMENS *	6,550
BEAM PATTERN	Spot
BEAM DISTANCE (1LX) (E-BOOST / E-MARK / FOG)	834m / 417m / 319m
# HIGH POWER LEDS	36 LED's
POWER CONSUMPTION (E-BOOST / E-MARK / FOG)	85W / 21W / 85W
CURRENT DRAW (@ 14.4V) (E-BOOST / E-MARK / FOG)	5.9A / 1.5A / 5.9A
MAX CURRENT DRAW (@ 10V) (E-BOOST / E-MARK / FOG)	8.5A / 2.1A / 8.5A
EFFICIENCY	69.9%
E-MARK REF	TBC
WEIGHT	400g

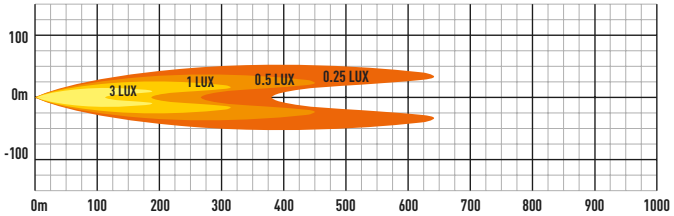
* Effective lumens measured in a 90° horizontal and 20° vertical field-of-view.

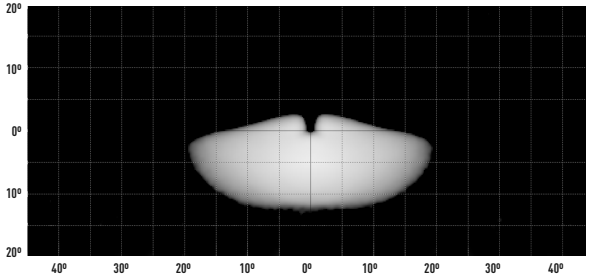
CARBON-6 (GEN3) SPOT - E-BOOST MODE





CARBON-6 (GEN3) SPOT - FOG MODE





MOMENTARY SWITCH - PIN4 - FOG MODE

- If the hold time for the switch is ≤ 750ms then the beam pattern changes from **default** mode to **fog** mode and is retained after the switch is released.
- If the hold time for the switch is ≥ 750ms then the beam pattern changes from **default** to **fog** but, the mode will not be retained after the switch is **released and it will revert to the previous state (default).**

Lamp features a built-in DT04-4P Deutsch Connector.
(Gold plated solid DT contacts)

Vehicle side will require the a DT06-4S Deutsch Connector.

PIN 1
Red - Positive (+V) 1mm²
(OD 2mm)

PIN 2
Black - Negative (-V) 1mm²
(OD 2MM)

PIN 3
Green - E-Mark (Signal) 0.5mm² (OD 1.5MM)

PIN 4
Purple - Fog (Signal) 0.5mm²
(OD 1.5MM)

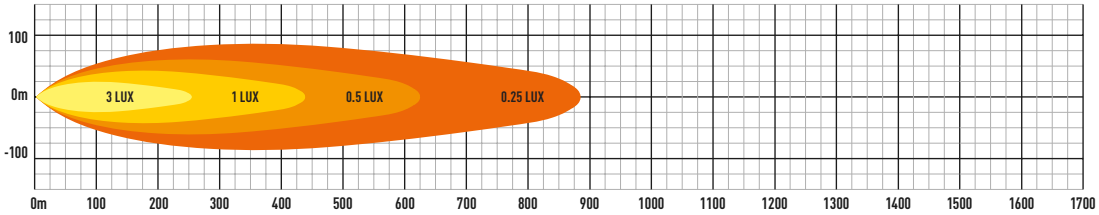
PIN 3 is "PWM capable". Race teams wishing to use PWM to control the output of their lights - please see page 5

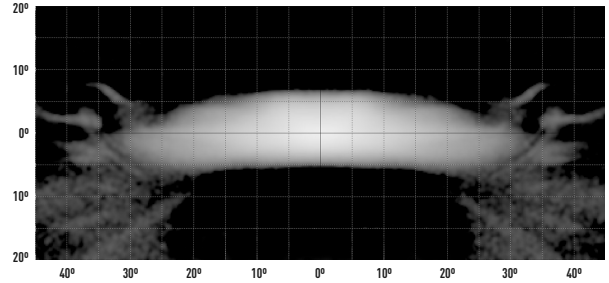
CARBON-6
DRIVE

VOLTAGE RANGE	10V - 32V
RAW LUMENS (E-BOOST / FOG)	9,360 / 9,360 (TOTAL: 18720)
EFFECTIVE LUMENS *	6,540
BEAM PATTERN	Drive
BEAM DISTANCE (1LX) (E-BOOST / E-MARK / FOG)	500m / 241m / 238m
# HIGH POWER LEDS	36 LED's
POWER CONSUMPTION (E-BOOST / E-MARK / FOG)	85W / 21W / 85W
CURRENT DRAW (@ 14.4V) (E-BOOST / E-MARK / FOG)	5.9A / 1.5A / 5.9A
MAX CURRENT DRAW (@ 10V) (E-BOOST / E-MARK / FOG)	8.5A / 2.1A / 8.5A
EFFICIENCY	69.8%
E-MARK REF	TBC
WEIGHT	400g

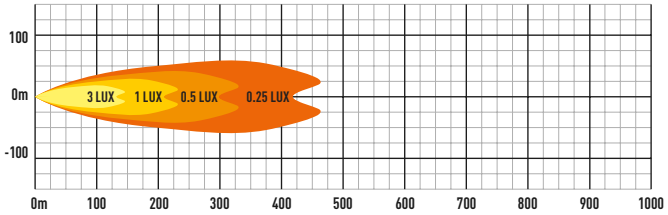
* Effective lumens measured in a 90° horizontal and 20° vertical field-of-view.

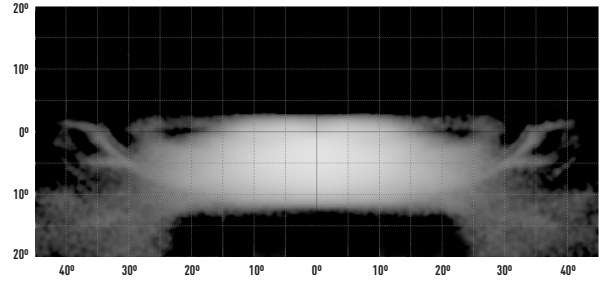
CARBON-6 (GEN3) DRIVE - E-BOOST MODE





CARBON-6 (GEN3) DRIVE - FOG MODE





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(Gold plated solid DT contacts)

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PIN 1
Red - Positive (+V) 1mm²
(OD 2mm)

PIN 2
Black - Negative (-V) 1mm²
(OD 2MM)

PIN 3
Green - E-Mark (Signal) 0.5mm² (OD 1.5MM)

PIN 4
Purple - Fog (Signal) 0.5mm²
(OD 1.5MM)

PIN 3 is "PWM capable". Race teams wishing to use PWM to control the output of their lights - please see page 5

RECOMENDED MOUNTING OPTIONS

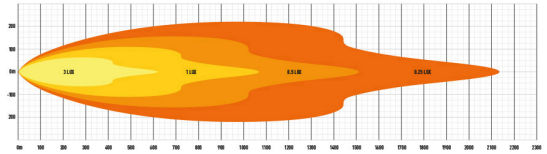
4-LAMP SYSTEM
(0064-MKII/SKODA/C3)

4 WAY RALLY PODS
(0064-MKII/SKODA/C3)

Our ultimate solution for easy adjustment on vehicle, and maximum lighting performance. Pods include fine tuning adjustment mechanism as refined and used in the World Rally Championship.

RAW LUMENS	37,440
EFFECTIVE LUMENS	26,100
QUICK RELEASE CAPABLE	YES
CURRENT DRAW (AT 14.4V)	24A (E-BOOST MODE)

4-WAY RALLY POD (2x CARBON-6 SPOT & 2x CARBON-6 DRIVE) - E-BOOST MODE



3-LAMP SYSTEM
(0068-B & 1117K)

BOOMER SINGLE (0062-00C6)

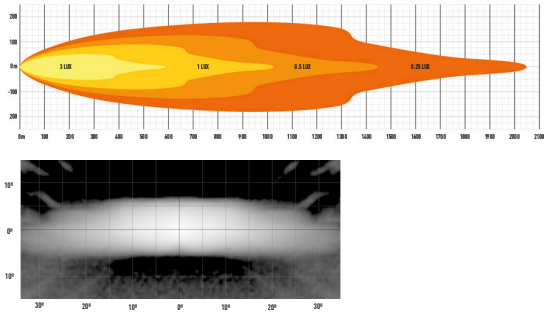
features quick release fasteners, including mounting fasteners to the bonnet.
We recommend 2x DRIVE for maximum spread.

ALUMINIUM SIDE BRACKETS (1117K)

No left/right adjustment.
Should be combined with a SPOT product aimed at the centre of the horizon for maximum distance.)
NOTE: Fasteners for mounting to vehicle are not supplied with this kit.

RAW LUMENS	28,080
EFFECTIVE LUMENS	19,619
QUICK RELEASE CAPABLE	YES
CURRENT DRAW (AT 14.4V)	18.3A (E-BOOST MODE)

2x CARBON-6 DRIVE & 1x CARBON-6 SPOT - E-BOOST MODE



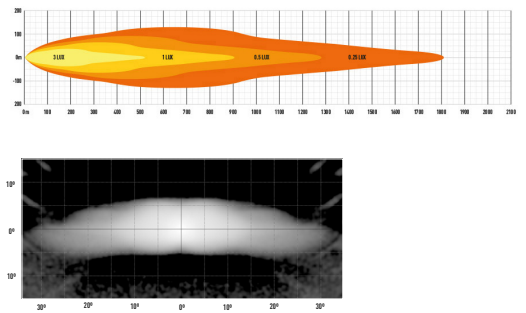
2-LAMP SYSTEM
(0062-00C6)

BOOMER SINGLE (0062-00C6)

features quick release fasteners, including mounting fasteners to the bonnet.
We recommend 1x SPOT and 1x DRIVE for maximum distance and spread.
Both lamps should be aimed dead ahead

RAW LUMENS	18,720
EFFECTIVE LUMENS	13,050
QUICK RELEASE CAPABLE	YES
CURRENT DRAW (AT 14.4V)	12A (E-BOOST MODE)

1x CARBON-6 DRIVE & 1x CARBON-6 SPOT - E-BOOST MODE



PMW INFORMATION

PWM SIGNAL REQUIREMENTS	
PWM SIGNAL FREQUENCY	100 Hz
TOLERANCE DUTY CYCLE	±2%
VOLTAGE AT "HIGH"	12V
VOLTAGE AT "LOW"	0V

Some race teams may wish to activate the different modes of these lamps by using a PWM signal. PIN 3 is PWM capable, so race teams should use a 100Hz PWM frequency, in order to obtain different beam patterns. See table.

LAMP MODE	INPUT SIGNAL		BEAM PATTERNS		CURRENT @ 13.5V (A)
	GREEN WIRE (E-MARK) **CONNECTOR PIN 3**	PURPLE WIRE (FOG) **CONNECTOR PIN 4**	HIGH BEAM	FOG BEAM	
E-BOOST	LOW	LOW	100	0	6.5
E-MARK	HIGH	LOW	25	0	1.625
FOG	LOW	HIGH	0	100	6.5
RAIN	HIGH	HIGH	0	25	1.625

AVAILABLE PWM MODES	INPUT SIGNAL		LIGHT OUTPUT		CURRENT @ 13.5V (A)
	12V PWM SIGNAL ON **PIN 3** (E-MARK PIN) DUTY CYCLE %	VOLTAGE ON **PIN 4** (FOG PIN)	PRIMARY BEAM % LUMEN OUTPUT	SECONDARY BEAM % LUMEN OUTPUT	
	0	0V	100	0	6.5
	10	0V	90	0	5.9
	18	0V	80	0	5.2
	26	0V	70	0	4.6
	34	0V	70	30	6.5
	42	0V	70	40	7.2
	50	0V	60	60	7.8
	58	0V	40	70	7.2
	66	0V	30	70	6.5
	74	0V	0	80	5.2
	82	0V	0	90	5.9
	90	0V	0	100	6.5
	100	0V	25	0	1.6
	0	12V	0	100	6.5
	10	12V	0	95	6.2
	18	12V	0	90	5.9
	26	12V	0	85	5.5
	34	12V	0	80	5.2
	42	12V	0	75	4.9
	50	12V	0	70	4.6
	58	12V	0	65	4.2
	66	12V	0	60	3.9
	74	12V	0	55	3.6
	82	12V	0	50	3.3
	90	12V	0	45	2.9
	100	12V	0	25	1.6