ETC

Halcyon Carbon

High End Systems



Type(s)

Project

Date

Notes

GENERAL INFORMATION

Halcyon framing fixtures redefine standards for rental operations and fixed installations world-wide. Halcyon Carbon, the small-sized fixture of the weather-rated Halcyon options, delivers up to 24,000 lumens from our Alloy light engine so users can choose to prioritize the "Highest Fidelity" or the "Ultra-Brightest" output. Exceptional performance in color, framing precision, and overall consistency, as well as an IP54 rating, make this generation of Halcyon the ultimate choice for any venue.

Applications

- Rental
- Events
- Award Shows
- Outdoor Festivals
- Schools
- Theatres
- Lecture Halls
- TV Studios
- House of Worship

Product Features

- 520 W Alloy White Light Engine capable of both 70 CRI Ultra-Bright and 93 CRI High Fidelity output
- Fixture output exceeding 24,000 lumens at 70 CRI and 20,000 lumens at 93 CRI
- High quality 13-lens optic system
- Extremely powerful 4.3°–50° zoom
- Dual wheel CMY and single wheel CTO color mixing system
- Six-position plus open color wheel
- Increased angle framing system for enhanced thrust and angle control and greater than 60% individual flag coverage
- 16-blade iris for extremely tight beam effects
- Proprietary Trifusion diffusion system with seamless diffusion transition in all optical positions
- Seven-pattern plus open Rotating Gobo Wheel
- Seven-pattern plus open interchangeable Fixed Gobo Wheel
- Dual prisms with simultaneous insertion
- Rotating animation wheel with greater than 90° incline control
- Optional RigPOV camera kit provides livestream camera feed from the fixture's perspective
- Weather-tested and rated to IP54

ORDERING INFORMATION

Model	Description
HAL-C	Halcyon Carbon, in Carton with Recyclable Foam inserts, Black
HAL-C-CAM	Halcyon Carbon with RigPOV, in Carton with Recyclable Foam inserts, Black
RC-HAL-C	Road Case for Halcyon Carbon, Includes Molded Inserts for two Fixtures

Color Options: Fixtures ship standard in black. White available by request.
Included Accessories: Fixture includes two (2) 180 mm single-hole Omega brackets, one (1) fixture power cord - bare ends to powerCON® TRUE1 compatible connector, and a safety cable.

Accessories

Model	Description
ACC-HAL-C-TH	Top Hat, Snoot for Halcyon Carbon
ACC-HAL-C-SPS	SpotPilot Side Handle with Iris and Intensity Control for Halcyon Carbon
ACC-HAL-C-SPR	SpotPilot Rear Handle with Iris and Intensity control for Halcyon Carbon
CT-5914	Multiverse Connect Module

PRODUCT SPECIFICATIONS

Source

Engine	Alloy Dual Color Rendering LED Engine
LED Details	520 W
Field Lumens	See photometrics on page 4
Max Integrating Sphere Lumens	24,000 @ 70 CRI / 20,000 @ 93 CRI
LPW	41
LED Life	50,000 hours
Native CCT	6500 K / 6000 K

Color

Color Mixing	Dual wheel cyan, magenta, and yellow
Color Temperature	Single wheel CTO variable down to 2700K
Color Wheel	Six (6) dichroic colors plus open

Optical

Beam Angle Range	4.3°–50°
Gate Size	17 mm
Aperture Size	135 mm
Pattern Projection	-Rotating and indexable wheels with seven (7) interchangeable patterns plus open -Fixed gobo wheel with seven (7) interchangeable patterns plus open
Animation	Bi-directional rotating animation wheel with linear insertion, and incline control
Prism	Five-facet star and four-facet linear rotating prism with simultaneous insertion
Diffusion	Light, Medium, and Heavy frost seamlessly controlled with Trifusion control in all optical positions
Iris	16-blade iris
Framing	Four-plane, Thrust/Angle framing system with improved low thrust control and 180° module rotation
Flicker Control/Hz Range	2.4 kHz, 16 kHz, and 25 kHz

Control

Input Method	DMX (5-pin) or Ethernet
Protocols	DMX via RS-485 Art-Net or sACN via Ethernet
Ethernet Pass-Thru	Passive Ethernet in and thru with and without power
Data Conversion	Patented data conversion system for Ethernet to DMX
Modes (Footprint)	Standard (61 channels)
RDM Functions	Yes
UI Type	Full-color graphical UI with 6-button navigational control NFC Configuration
Local Control	Yes
Dimming Performance	16-bit, DMX controlled
Wireless	Multiverse via optional Multiverse Connect Module (Model Number)

Electrical

Voltage Range	100–240 V 50–60 Hz
Input Method	REAN® power X Series Connectors
Wattage	900 W
Current (Max)	9.82 A @ 100 V 4.02 A @ 240 V
Fixtures per Circuit	2 fixture (R20 module or similar) Note: REAN power X Series connector rated for 20 A (120 V/60 Hz) and 16 A (240 V/50 Hz)

Thermal

Ambient Operating Temp	-20°C to 40°C (-4°F to 104°F)
Fan Mode	Standard, Studio, and Linear Continuous control channel

Physical

Pan and Tilt Range	630/540° pan, 263° tilt
Max Pan/Tilt Speed	360° in 1.85 s/180° in 1.10 s
Materials	Steel and aluminum frame with aluminum and molded plastic covers
Color Options	Black, white by request
Mounting Options	Any orientation
IP Rating	IP54, for use both indoors and outdoors
Weight	31.6 kg (69 lb)
Included Accessories	X Series IP65 to bare end fixture tail Two (2) 180 mm single-hole Omega brackets Safety cable

Warranty

Warranty Details	etcconnect.com/Warranty

Regulatory & Compliance

Approved regulatory standards	cETLus Listed Listed to UL 1573 Certified to CSA STD. C22.2 No: 166 CE Compliant UKCA Compliant CB Certified
Complies to the ROHS directive	Yes

Safety

Safety	Minimum distance to illuminated surface = 3.0 m (9.8 ft) Minimum distance from fixture head to combustible materials = 0.1 m (4.0 in)

Notes: All LED sources experience some lessening of light output and some color shift over time. LED output will vary with thermal conditions. Thermal conditions can be affected by ambient temperatures and orientation.

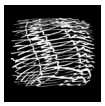
FEATURE DETAILS

Rotating Gobo Details

Outside Diameter	27 mm (1.06 in)
Image Diameter	15 mm (0.59 in)
Materials	1.1 mm fused silica

Rotating Gobo Wheel

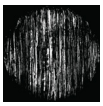
1 - Wiggle Block



2 - Mycelium Patch



3 - Bob's Brush



4 - The Claw



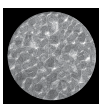
5 - Cut Cone



6 - Split-S

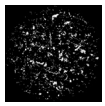


7 - Ice

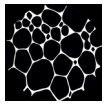


Fixed Gobo Wheel

1 - Texture Drops



2 - Lovely Bubbly



3 - Art Ducko



4 - Window Matrix



5 - Swirly Gig



6 - Fenced In



7 - The Only Way Is Up



Fixed Gobo Details

Outside Diameter	30 mm (1.18 in)
Image Diameter	14 mm (0.55 in)
Materials	0.5 mm aluminum 1.1 mm glass Borofloat®

Color Wheel Details

Shape	Interchangeable wedge
Materials	1.1 mm glass Borofloat®

1 - Red

2 - Blue

3 - Yellow

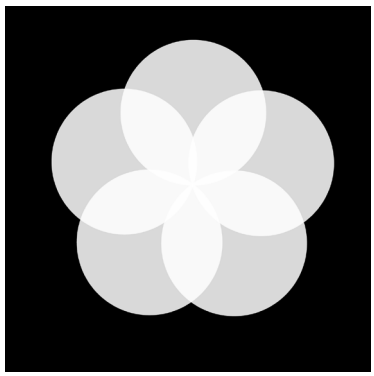
4 - Purple

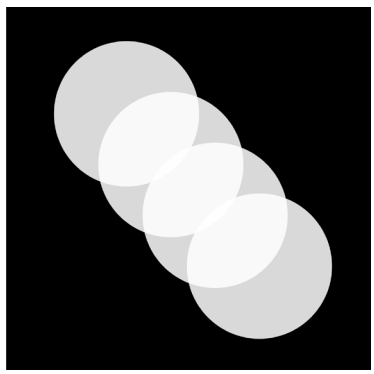
5 - Orange

6 - Dark Blue

Prism Details

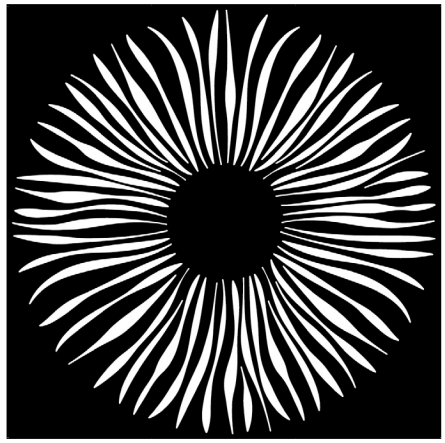
Movement	Two prism flags with dual insertion
Materials	Molded optical glass





Animation Wheel Details

Movement	Bi-directional continuous rotation with Linear insertion with greater than 90° angular path range
Materials	0.8 mm aluminum



RigPOV (Optional)

Camera Type	1080p low-latency camera
Communication	NDI HX, RTSP, RTMP, SRT
Connection	RJ45 port in fixture base, replaces Ethernet thru connection
Mounting	Exterior mounted with external screws for easy conversion
Weather Rated	Yes (IP54) when installed



PHOTOMETRIC DATA

6500 K

	Degree	Candela (UB/HF)	Field Lumens (UB/HF)	Power Usage	Lumens Per Watt (UB/HF)
Narrow	4.3°	2,713,454 / 2,073,157	8,394 / 6,078	520 W	16 / 12
Medium	26°	145,231 / 104,017	21,784 / 16,000	520 W	42 / 31
Wide	50°	32,265 / 25,945	21,449 / 15,754	520 W	41 / 30

5600 K

	Degree	Candela (UB/HF)	Field Lumens (UB/HF)	Power Usage	Lumens Per Watt (UB/HF)
Narrow	4.3°	2,110,280 / 1,782,967	6,428 / 5,227	520 W	13 / 10
Medium	26°	112,947 / 89,457	16,942 / 13,760	520 W	33 / 26
Wide	50°	25,093 / 22,314	16,681 / 13,549	520 W	32 / 26

4400 K

	Degree	Candela (UB/HF)	Field Lumens (UB/HF)	Power Usage	Lumens Per Watt (UB/HF)
Narrow	4.3°	1,897,175 / 1,492,776	5,869 / 4,377	520 W	11 / 8
Medium	26°	101,541 / 74,897	15,231 / 11,521	520 W	29 / 22
Wide	50°	22,559 / 18,682	14,997 / 11,344	520 W	29 / 22

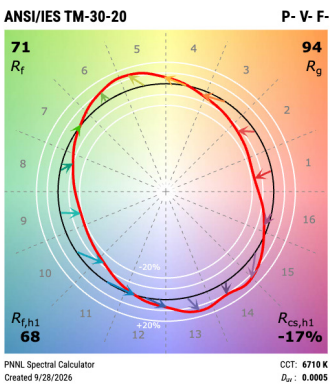
3200 K

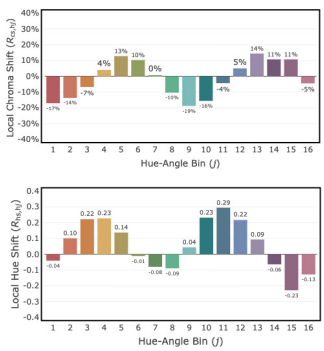
	Degree	Candela (UB/HF)	Field Lumens (UB/HF)	Power Usage	Lumens Per Watt (UB/HF)
Narrow	4.3°	1,641,698 / 1,264,677	5,078 / 3,708	520 W	10 / 7
Medium	26°	87,868 / 63,453	13,180 / 9,760	520 W	25 / 19
Wide	50°	19,521 / 15,827	12,977 / 9,610	520 W	25 / 18

To determine center beam illumination in footcandles at any throw distance (ft), divide candela by the throw distance (ft) squared. ftcd = candela/ft²

To determine center beam illumination in lux at any throw distance (m), divide candela by the throw distance (m) squared: lux = candela/m²

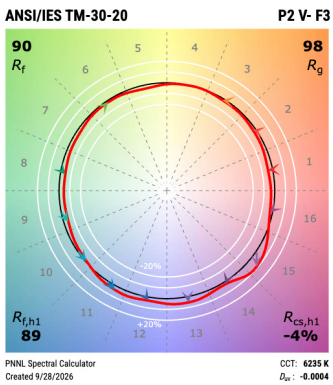
Ultra-Bright TM-30

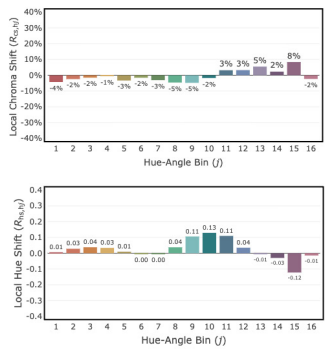




Additional Color Metrics	
CRI R_a (R_9)	71 (-22)
TLCI	48

High Fidelity TM-30





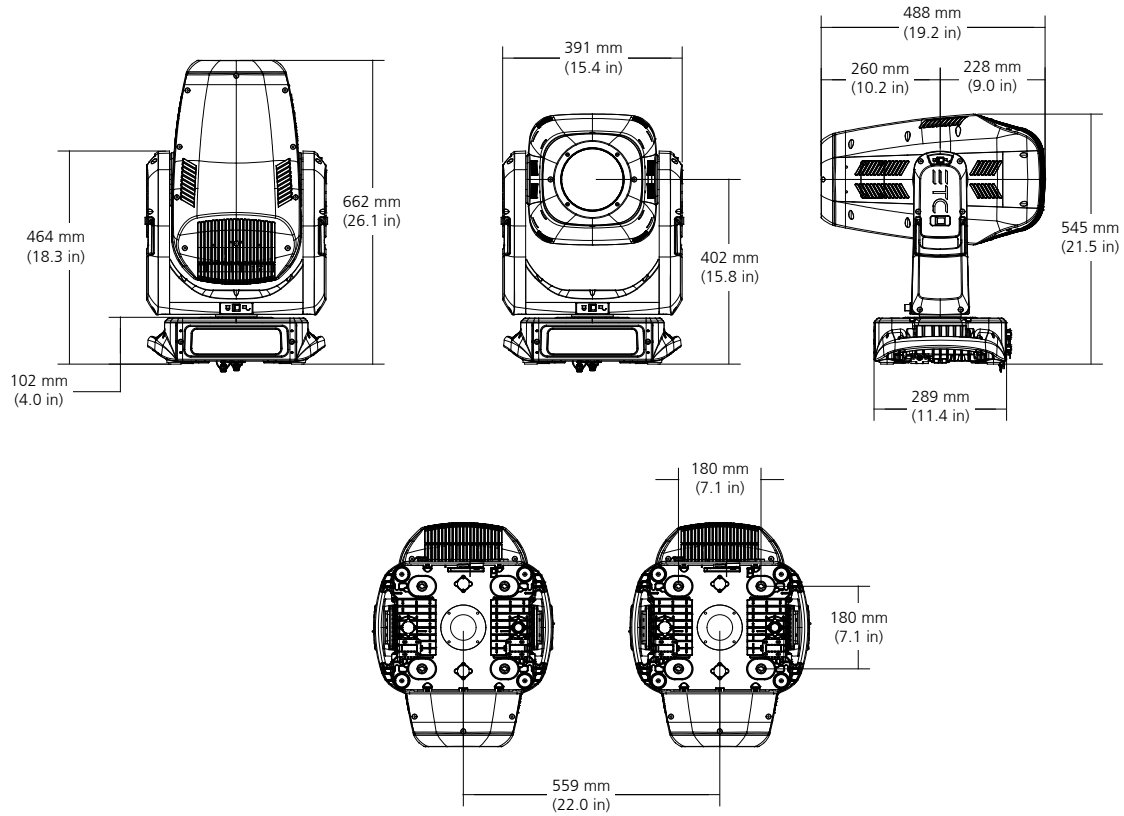
Additional Color Metrics	
CRI R_a (R_9)	93 (76)
TLCI	93

Product Dimensions

Model	Height		Width		Depth		Weight	
	in	mm	in	mm	in	mm	lb	kg
Halcyon Carbon**	26.1	662	15.4	391	11.4	289	69.7	31.6
Halcyon Carbon in Box with Foam Insert	30.1	765	20.0	510	17.1	435	81.4	36.9

**Does not include mounting hardware

Halcyon Carbon



POWER TABLE

VAC	Amps	Hz	Watts	VA	PF
100	9.8	50	982	979	0.99
120	8.0	60	960	967	0.98
200	4.8	50	960	950	0.96
208	4.6	60	957	955	0.95
220	4.4	50	968	956	0.96
230	4.2	50	966	954	0.95
240	4.0	60	960	967	0.94

WEATHER PROTECTED

Halcyon Carbon's rain-proof and dust-proof design allows it to be used in all types of weather and climates. Thanks to advanced IP54 design features and hydrophobic filtering techniques Carbon can be used outdoors just as readily as indoors, and all without additional maintenance, vacuum seal tests, or specialized tools.

Outdoor related features

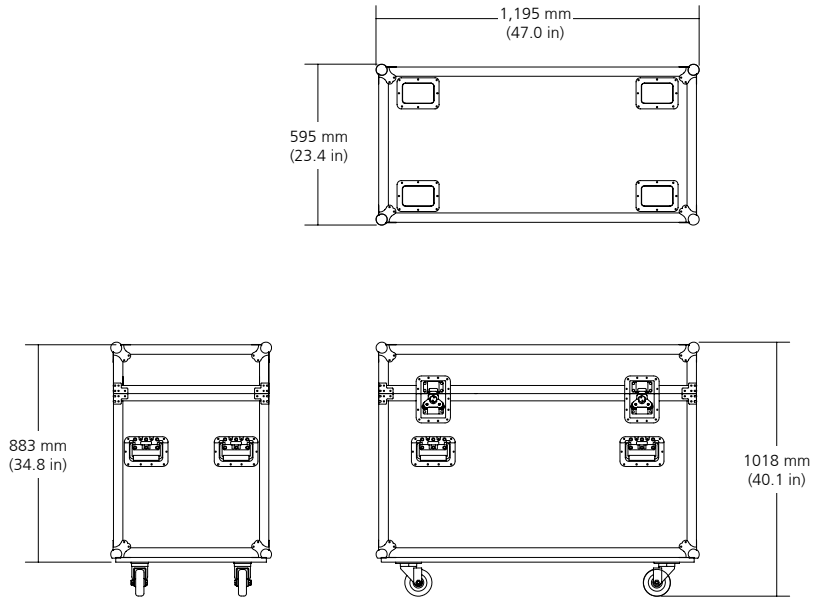
- Rain-Proof
- Dust-Proof
- Hydrophobic Air Filtering
- Cold Weather Preheating
- Control Loss Sun Protection
- Patented Defogging Technology

ADDITIONAL ORDERING INFORMATION

Additional Accessories

Model Number	Description
ACC-HAL-C-CAM	RigPOV accessory, existing fixture install kit
OB180-3	Omega bracket, 180 mm three-hole, black
OB180-1	Omega bracket, 180 mm single-hole, black (Included)
T1PA-A	Fixture Power Cord Upgrade, 5 ft TRUE1 TOP to Parallel Blade U-Ground (Edison)
T1PA-SP	Fixture Power Cord Upgrade, Stage Pin to powerCON TRUE1 TOP, 20 A
T1PA-L620	Fixture Power Cord Upgrade, L6-20 to powerCON TRUE1 TOP, 20 A
T1PA-L520	Fixture Power Cord Upgrade, L5-20 to powerCON TRUE1 TOP, 20 A
MEGA-CLW	MegaClaw™
HALF-COU	Half-Coupler, 2" Alloy, Truss Clamp
MI-HAL-C	Molded Insert for Halcyon Carbon, Black

Optional Roadcase Dimensions



Case Weight:
80.0 kg (176 lb)
Includes 2 Molded Inserts and no Fixture

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