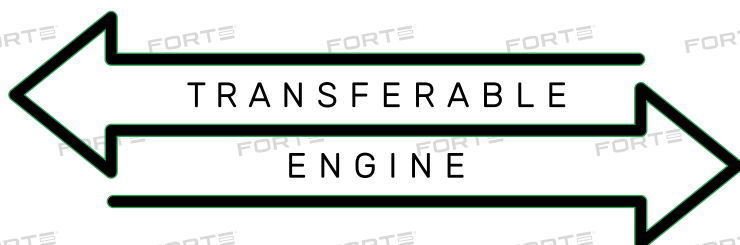


**FORTE<sup>®</sup>**



**FORTE<sup>®</sup> FS**

**ROBE<sup>®</sup>**



# FORTE®

**PIONEERING A NEW ERA  
IN HIGH OUTPUT LUMINAIRES  
WITH WHITE SOURCE LED ENGINES**

Our ground-breaking TE™ - TRANSFERABLE ENGINE technology has revolutionised the way we view, and indeed use LED light engines. It has redefined the boundaries of technological development in LED luminaires.

We now harness all the advantages of TRANSFERABLE ENGINE technology to produce our brightest, most advanced LED luminaire to date, FORTE®.

With a choice of either the TE™ 1.000W HP White LED engine (HP – High Performance) generating the highest output possible, or the TE™ 1.000W HCF White LED engine (HCF – High Colour Fidelity) for those requiring exceptional colour rendition, FORTE® gives you the next generation in performance strength and excellence, while cost-effectively removing the problem of maintaining light-quality consistency over time.

Once again proudly designed, developed, manufactured, and patented in our factory in the Czech Republic, we have ensured FORTE® delivers superior performance and innovation while at the same time providing far more subtlety and finesse than found before on a luminaire of its type.

The powerful combination of engine choice, our most precise optics ever, and our new, standard defining CMY colour mixing system give you the perfect platform to migrate from discharge to LED sources without performance compromise.

Our speciality is to excel at cutting-edge technology. FORTE® is packed with innovations and features, such as our patent-pending minimum zoom output boost, negating the problem of output loss at narrow zoom settings. The ability to use frosts over the entire zoom range makes them more flexible than ever before.

FORTE® delivers a comprehensive package of dynamic effects commensurate with a fixture of its class, with dual rotating gobo wheels, an animation wheel, and Robe patented dual overlaying prism system.

The next generation patented framing shutter module produces ultra-fine cuts with maximum flexibility, to guarantee both precision and repeatability.

As with our legendary BMFL™, we still maintain the advantage of size and weight, with FORTE® being highly compact and comparatively lightweight at 41 kg.

Using the most advanced design and engineering techniques, in combination with the TRANSFERABLE ENGINE system, we have future-proofed FORTE®, to give it a life way beyond the current norm, for you to enjoy a greater return on your investment.

FORTE® - Excellence, Speciality, Strength.

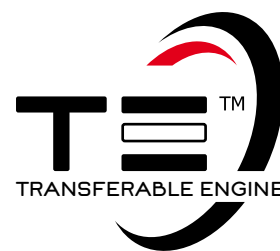
**Josef Valchar**  
CEO

**ROBE®**

# FORTE®

TRANSFERABLE ENGINE





## *Robe's exclusive TE™ - TRANSFERABLE ENGINE system guides performance lighting into the future!*

Our reputation for innovative design, hard-earned over more than 30 years, is the result of asking questions, listening to customers, and repeatedly redefining the boundaries of technology.

We have the most forward-thinking engineers and designers in our industry. We wanted to address the problem that white source LED engines cannot last forever and vary in colour consistency over time. The result of this intensive, and indeed extensive process is the ground-breaking **TRANSFERABLE ENGINE**.

The fast change, low-cost **TRANSFERABLE ENGINE** technology ingeniously solves the problem of performance longevity for those preferring the higher brightness of white source LEDs as an obvious replacement for their ageing stock of discharge workhorses.

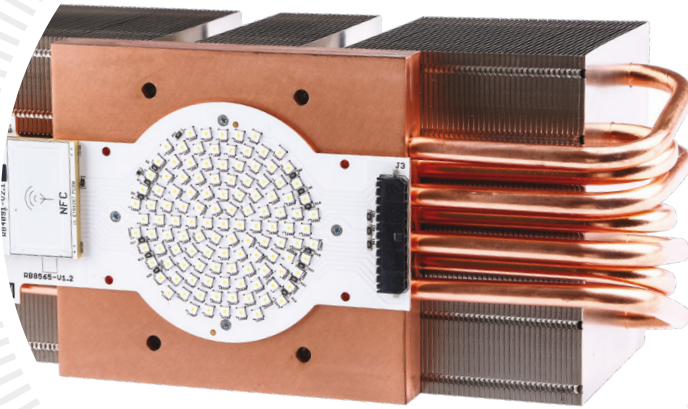
To ensure the very best performance and consistency, we have designed, developed, patented, and manufactured the engines all within our own factory in the Czech Republic. They provide a monumental shift in LED technology and fixture design.

Commensurate with this level of technology, every Robe **TRANSFERABLE ENGINE** has its own, unique, memory with all engine data staying with the engine. This means when you transfer the engine to a new fixture, the data travels with it.

All data stored on the **TRANSFERABLE ENGINE** is easily accessible through Near Field Communication (NFC) technology via the ROBE COM app. This provides direct access to the engine information, including engine type and serial number; full module installation history; intensity compared to initial performance; hours worked and much more. All data is available without powering the engine while sitting on your shelf, giving you instant accessibility. Furthermore, when the module is installed in a fixture, the data is available directly from the fixture display.







Our **TRANSFERABLE ENGINES** are fast-changing, taking under 5 minutes. They require no special tools, complex procedures or return to workshop or agent. With no alignment or calibration needed, you have a rapid “lamp-like” exchange.

Robe **TRANSFERABLE ENGINES** are very economical, costing approximately twice the price of high-performance discharge lamps. Combined with the advantages of LED, you now have the tools available to maintain a high level of light consistency across your inventory.

Transferable means a new engine at a lower cost, compared to a replacement engine at a far higher price. With no warranty or reduced LED lifetime issues, they carry a four-year 20.000-hour warranty.

Another benefit of the self-referencing engines is their ability, via our unique software, to give you a visual performance reference. Being able to quickly set the outputs to a consistent level, even while the fixtures are up in the rig, will save you a lot of time in the pressurised world of touring.

Robe fixtures utilising the **TRANSFERABLE ENGINES** technology have been deliberately designed with built in capacity to take advantage of possible future LED engine development. This forethought, combined with their ease of transfer, will give you an even greater luminaire longevity.

In line with our stringent Green Policy, when the engines have reached the end of their life, we have the Robe **TRANSFERABLE ENGINES** free return for recycling offer, making them very Eco-friendly.

The **TRANSFERABLE ENGINES** concept pioneers a new era in luminaires using white source LED engines. It gives you the ability to cost-effectively maintain a high level of quality light consistency across your inventory while ensuring the highest level of return on your investment.





**Forte means Excellence, Speciality, Strength. Our FORTE® certainly lives up to its name! With a choice of premium performance engines from our revolutionary TRANSFERABLE ENGINE technology, giving you the ability to maintain light quality, combined with a fixture packed full of specialist innovation, you have the luminaire ready to lead you into the future.**

You can now choose between the TE™ 1.000W HP White LED Engine (HP – High Performance), producing the highest output possible, or the TE™ 1.000W HCF White LED Engine (HCF – High Colour Fidelity) for those requiring exception colour quality. Now you can fit either engine within the same fixture, without alignment or warranty issues, within five minutes! Without the expense, and complication of needing separate luminaires with differing sources, TRANSFERABLE ENGINES give you the right engine, in the right fixture, at the right time!

The revolutionary self-referencing, data capturing engines are all designed, developed and manufactured within our own factory (Robe patented technology). Performance has not been compromised, with the TE™ 1.000W HP White 6.700K LED Engine producing a piercing 50.000 lm and the TE™ 1.000W HCF White 6.000K LED Engine 35.000 lm with its exceptionally high inherent CRI of 96. The L70/B50 ratings of 50.000 hours, means longevity is assured.

Harnessing the strength of the self-referencing, data capturing TRANSFERABLE ENGINES, FORTE® has wide ranging 5 - 55 degree zoom capability to fulfil all your spot, wash and beam applications, contained within its class-leading 41 kg frame. Usual output loss at the narrow zoom setting is taken care of via our ingenious Robe Patent pending narrow zoom output boost, improving performance by over 15 %, giving you a dramatically increased output, perfect for sabre like beams.

Robe's new, cutting-edge, CMY colour mixing system provides beautifully smooth colour transitions. Combined with two colour wheels, CRI 80 and 90 filters (HP Engine), and a variable CTO from 3.000K - 6.700K gives FORTE® total colour finesse.

The comprehensive, dynamic effects package includes; two fully indexable, rotatable gobo wheels each with 6 gobos using the fast change Robe slot and lock system; two stackable 6-facet prisms, one linear, one round; animation wheel and an ultra-fast motorized iris. The two rapid insert interchangeable frosts, a soft 1° and a medium 5° for silky smooth washes cover the entire zoom range of 5-55 degrees with no restricted range cut off.

FORTE® gives you total control via our ultra-precise patented PLANO4™ framing shutter system, with separate blade control and the entire assembly capable of +- 60° rotation; Cpulse™ PWM control and direct ChromaTint™ Plus/Minus Green control for broadcast precision; EMS™ (Electronic Motion Stabiliser) technology, for instant stop and hysteresis elimination, making FORTE® the ideal fixture for RoboSpot™; L3™ (Low Light Linearity) dimming producing imperceptible fades to black.

FORTE® possesses a comprehensive protocol suite; USITT DMX 512, RDM, ArtNet, MA Net, MA Net 2, and sACN. REAP™ (Robe Ethernet Access Portal) is included for direct communication over Ethernet networks. DMX Wireless control is available on request. All this allows seamless integration into all control networks.

The FORTE® FS is equipped with the digital camera on the head and can be connected with the RoboSpot™ BaseStation for off-stage follow spot operation.

## Source

- Light source type: **TE™ 1.000W HP White LED Engine** (Patented)
  - HP - High Performance Engine for maximum light output and optimal colour characteristics
  - LED Engine output: 82.000 lm
  - Fixture total lumen output: 50.000 lm (integrated sphere) 40.000 lm (goniophotometer)
  - Colour temperature output: 6.700K
  - CRI: 70, remotely selectable filters for CRI 80 and CRI 90
  - Illuminance: 113.000 lx @ 5 m
- Light source type: **TE™ 1.000W HCF White LED Engine** (Patented)
  - HCF - High Colour Fidelity Engine for the best light quality and colour rendition.
  - LED Engine output: 55.000 lm
  - Fixture total lumen output: 35.000 lm (integrated sphere) 28.000 lm (goniophotometer)
  - Colour temperature output: 6.000K
  - CRI: 96, TLCI: 97, TM-30-18 Rf: 92, TM-30-18 Rg: 99
  - Illuminance: 78.000 lx @ 5 m
- LED life expectancy: min. 50.000 hours
- Typical lumen maintenance: L70/B50 @ 50.000 hours
- Light source warranty: 4 years or 20.000 hours

- Rotating gobo wheel 2: 6 rotating, indexable and replaceable breakup and aerial gobos + open, patented slot & lock system
- Animation wheel: Aluminium animation wheel, used alone or in combination with gobos, rotating in both directions at variable speed
- MLP™ - Patented Multi-Level Prisms allow multiple prisms to be "stacked" while retaining individual speed and direction control. With variable shape and size it creates unlimited dynamic, multi-level flower and beam effects.
  - Prism 1: Independent 6-facet linear prism rotating in both directions at variable speed
  - Prism 2: Independent 6-facet circular prism rotating in both directions at variable speed
- MagFrost™ - magnetic paddle fast change system providing exchangeable frosts containing as standard a very light 1° for instant softening of the projected gobo or framing shutters, and a medium 5° for even wash, both specifically selected for theatre and TV use
- Hot-Spot: From flat field to 6:1 hot-spot (optional)
- Iris: Motorized, stepless, pulse effects up to 3 Hz
- Motorized zoom and focus
- Electronic strobe effect with variable speed up to 20 Hz, pre-programmed randomstrobe & pulse effects
- High resolution electronic dimming: 0-100%
- L3™ - (Low Light Linearity) Imperceptible 18 bit dimming for ultra smooth fade to black
- Extremely quiet operation suitable for all types of production in Theatre and TV
- Cpulse™ - special flicker free management for HD and UHD cameras, ready for 8K and 16K
- AirLOC™ - (Less Optical Cleaning) technology greatly reduces the level of airborne particles drawn over the optical elements. This increases the overall performance, light quality and time between routine cleaning and maintenance.

- Wireless CRMX™ technology from Lumen Radio - on request
- Epass™ - Ethernet pass through switch which sustains Ethernet integrity, when the fixture has no power, to automatically maintain network connectivity
- DMX Protocol modes: 1
- Control channels: 54
- Pan & Tilt resolution: 16 bit
- CMY & CTO: 8 bit
- + - Green correction: 8 bit
- Colour wheel positioning: 16 bit
- Framing shutters module movement & rotation: 8 bit
- Rotating gobo wheel positioning: 8 bit
- Gobo indexing & rotation: 16 bit
- Animation wheel: 8 bit
- Animation wheel rotation: 8 bit
- Iris: 16 bit
- Frost: 8 bit
- Zoom: 16 bit
- Focus: 16 bit
- Dimmer: 16 bit (internal 18 bit)

## Optical System

- Robe's proprietary optical design
- High-efficiency 13-lens zoom optical system, ratio 11:1
- Zoom range: 5° - 55°
- Output lens diameter: 180 mm

## Dynamic Effects and Features

- Cyan: 0-100%
- Magenta: 0-100%
- Yellow: 0-100%
- Variable CTO: 3.000K - 6.700K
- ChromaTint™ - Patented plus / minus green correction function
- Colour Wheel 1: 5 fixed dichroic colours + white
- Colour Wheel 2: 5 fixed dichroic colours + white
- Framing shutters: Patented Plano4™ framing shutters module with 4 individually positionable blades plus rotation of the complete framing system +-60°
- Rotating gobo wheel 1: 6 rotating, indexable and replaceable breakup and aerial gobos + open, patented slot & lock system

## Control and Programming

- Setting & Addressing: ROBE Navigation System 2 (RNS2)
- Display: QVGA Robe touch screen with battery backup, gravitation sensor for auto screen positioning, operation memory service log with RTC, stand-alone operation with 2 editable programs (each up to 80 steps), built-in analyser for easy fault finding
- Protocols: USITT DMX-512, RDM, ArtNet, MA Net, MA Net2, sACN
- REAP™ - Robe Ethernet Access Portal

## Movement

- Pan movement: 540°
- Tilt movement: 270°
- Movement control: Standard and Speed
- Controllable speed of Pan & Tilt movement
- EMS™ - Electronic Motion Stabilizer system for Pan & Tilt reducing beam deviation caused by truss movement or vibration (Patent pending)
- Automatic Pan & Tilt position correction

## Rotating Gobos

- 12 x Fully rotating, indexable glass gobos on two wheels
- Outside diameter: 30.8 mm
- Image diameter: 25.0 mm
- Thickness: 1.1 mm
- Max. thickness: 3.5 mm
- High temperature borofloat or better glass
- Patented slot & lock system for easy replacement of gobos

## Effect Wheel

- Single animation wheel
- Material: Aluminium
- Diameter: 112 mm
- Can be used alone or in combination with rotating gobos
- Rotating in both directions at variable speed

## Camera - FORTE FS

- Type: XNZ-L6320A
- Resolution: 1920 x 1080, 16:9 Full HD (1080p) resolution support
- Zoom:
  - 32x optical zoom
  - 32x digital zoom
- Streaming: H.265, H.264, MJPEG Codec, Multiple streaming
- Vision: Day & Night (ICR), WDR (120dB), Defog
- Minimum illumination: 0.05 Lux

## Framing Shutters System

- Patented Plano4™ framing shutters module
- Shutters: 4 Blades, each with separate movement and +- 25° rotation control
- Movement: Smooth with variable speed, ultra-fast blade movements for creating mid-air effects
- Rotation: +- 60° of the complete framing system

## Thermal Specification

- Maximum ambient temperature: 45 °C (113 °F)
- Maximum surface temperature: 100 °C (212 °F)
- Minimum operating temperature: -5 °C (23 °F)
- Total heat dissipation: max. 3200 BTU/h (calculated)

## Noise Levels

- Sound pressure level: 21 dB(A) at 1 m (Super quiet mode)
  - 33 dB(A) at 1 m (quiet mode)
  - 44 dB(A) at 1 m (auto mode)
- Sound power level: 29 dB(A) (Super quiet mode)
  - 41 dB(A) (quiet mode)
  - 52 dB(A) (auto mode)

## Electrical Specification and Connections

- Power supply: Electronic auto-ranging
- Input voltage range: 100-240 V, 50/60 Hz
- Power consumption: max. 1250W
- Power connector in: Neutrik powerCON TRUE1
- DMX and RDM data in/out: Locking 3-pin & 5-pin XLR
- Ethernet port in/out: RJ45 for Embedded Epass™ switch 10/100 Mbps
- Ethernet port out: RJ45 - FORTE FS, camera video output
- USB connector (series A) for lightmaster purposes

## Approvals

- CE Compliant
- cETLus Compliant

## Environmental Information

### FORTE

- GWP (Global Warming Potential) total in modules A1-A3 (according LCA): 1120 Kg CO2e
- EPD registration number: EPD-IES-0011287:002 (S-P-11287)

## Mechanical specification

- Height: 843 mm (33.2")
- Width: 483.5 mm (19")
- Depth: 335 mm (13.1") - head in vertical position
- Weight: FORTE 41 kg (90.4 lbs)
  - FORTE FS 42.2 kg (93.1 lbs)
- Ingress protection rating: IP20

## Rigging

- Mounting positions: 0°, 32°, 90°
- Universal operating position
- Mounting points: 5 pairs of 1/4-turn locking points
- 2x Omega adaptors with 1/4-turn quick locks
- Safety cable attachment point
- Pan & Tilt transport locks

## Included Items

- User Manual
- Omega Adaptor CL-regular 2 pcs
- Power cord including powerCON TRUE1 In connector
- RoboSpot Camera for FORTE FS

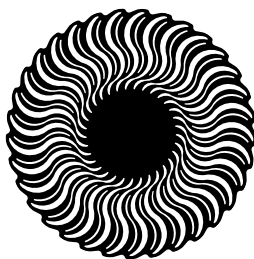
## Optional Accessories

- Forte TE™ 1.000W HP White LED Engine: 14080067
- Forte TE™ 1.000W HCF White LED Engine: 14080072
- Forte TE™ 1.000W TGW White LED Engine: 14080100
- Frost 0.5° (exchange) assembled: 10980581
- Frost 1° (exchange) assembled: 10980564
- Frost 3.5° (exchange) assembled: 10981037
- Frost 5° (exchange) assembled: 10980565
- Frost 10° (exchange) assembled: 10980556
- Frost 20° (exchange) assembled: 10980577
- Frost 30° (exchange) assembled: 10980582
- FS BMFL/ESPRITE/FORTE Handles - 2 pcs in box: 10980233
- Top Hat 55°: 10980591
- Top Hat 35°: 10981200
- Gel frame: 10980561
- Gel frame adaptor: 10981113
- Module of PC lens: 10980611
- Module of Fresnel lens: 10980610

- Hot-Spot lens in gobo holder: 10980557
- Doughty Trigger Clamp: 17030386
- Omega Adaptor Tall CL-regular 2 pcs in box: 10980501
- Safety wire 50 kg: 99011957
- Single Top Loader Case: 10120267-01
- Dual Top Loader Case: 10120268
- Foam Shell: 20020395-01

## Legal

- FORTE® is Registered Trademark of Robe lighting s. r. o.
- FORTE® Profile and FORTE® FS are patented by Robe lighting s. r. o. and protected by one or more pending or issued patents



## Animation Wheel

The new aluminium animation wheel (Ø 112 mm) can be used alone or in combination with gobos. The animation wheel is rotating in both directions at variable speed.





### Colour Wheel 1



### Rotating Gobo Wheel 1



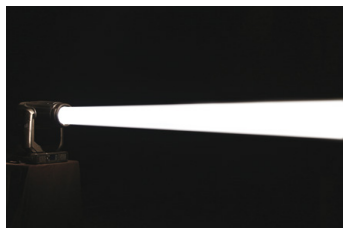
### Colour Wheel 2



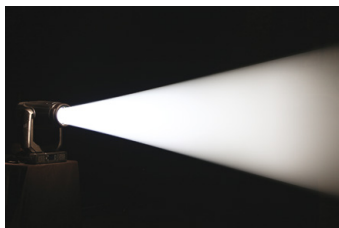
### Rotating Gobo Wheel 2



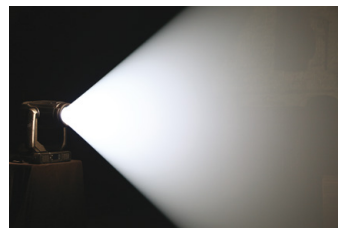
5° Min. Zoom



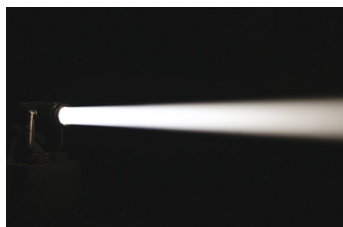
25° Mid. Zoom



55° Max. Zoom



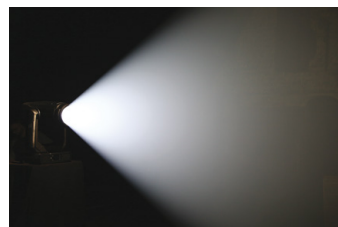
5° Min. Zoom with 5° Frost



25° Mid. Zoom with 5° Frost



55° Max. Zoom with 5° Frost

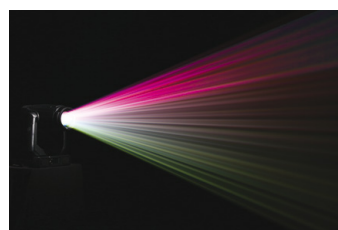
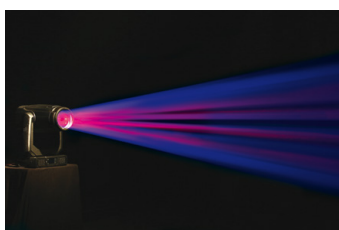
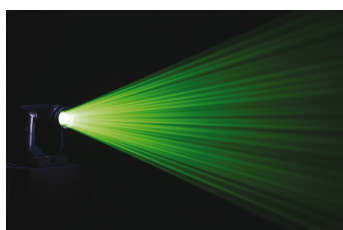
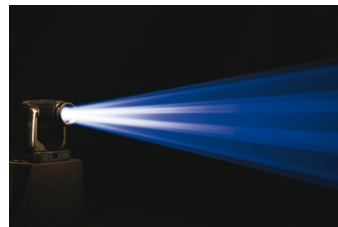
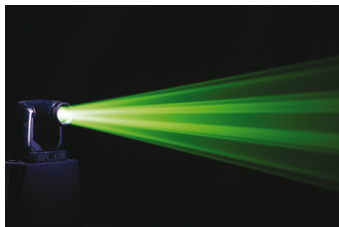
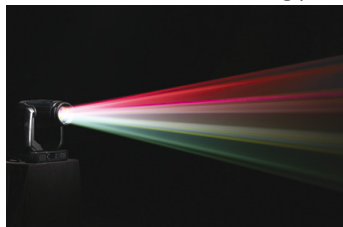


### Framing Shutters Module

FORTE® uses Robe's Plano4™ patented system of four, fast, smooth moving, shutter blades, which can be individually angled and positioned. The whole module assembly can further rotate  $\pm 60$  degrees. Thanks to the unique design, all four blades can be focused at the same time and can be further softened by applying a light 1° frost giving the edges soft diffusion essential in TV and Theatres. Shutters are precisely calibrated in the factory to ensure maximum accuracy and repeatability of programmed framing shapes.



6-facet circular and linear rotating prisms

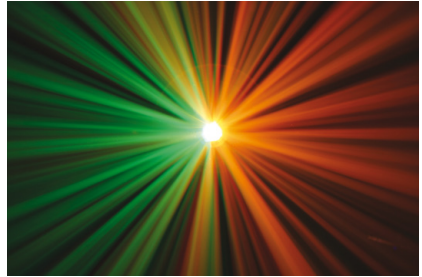
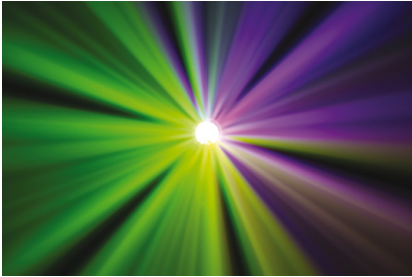
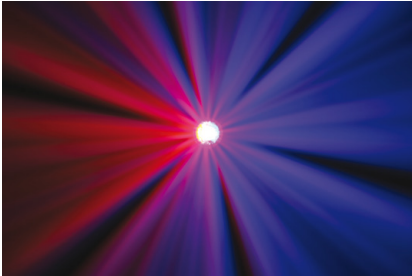
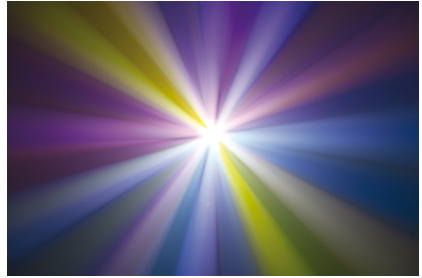
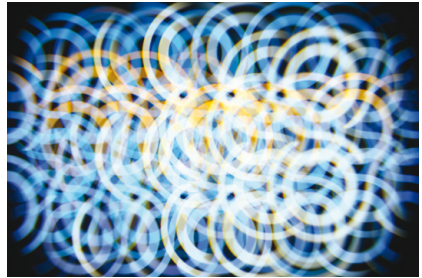
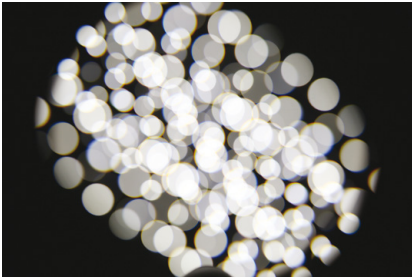
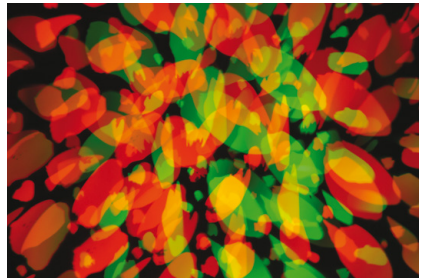
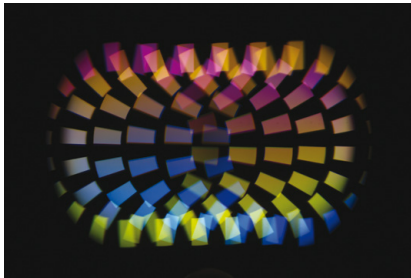
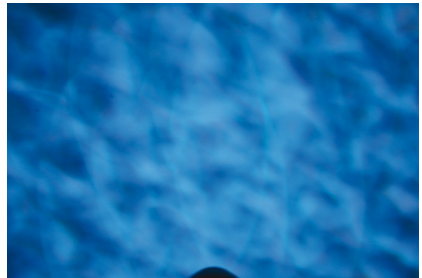
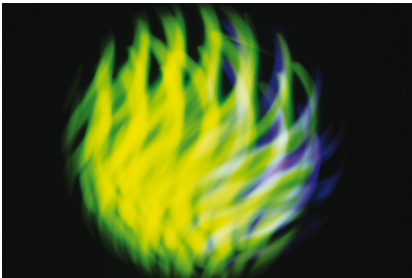




## Impressive Aerial and Graphic Effects

FORTE® will excite you with unlimited possibilities for animations and mid-air effects thanks to two gobo wheels with carefully selected break-up and aerial gobos, which can be further combined with a 6-facet circular or 6-facet linear rotating prism or with both, with animation wheel, split colours and a special multi-colour filter.

By using these features, you will achieve eye-catching animations and effects like clouds, rain, water, fire and more abstract morphing images.

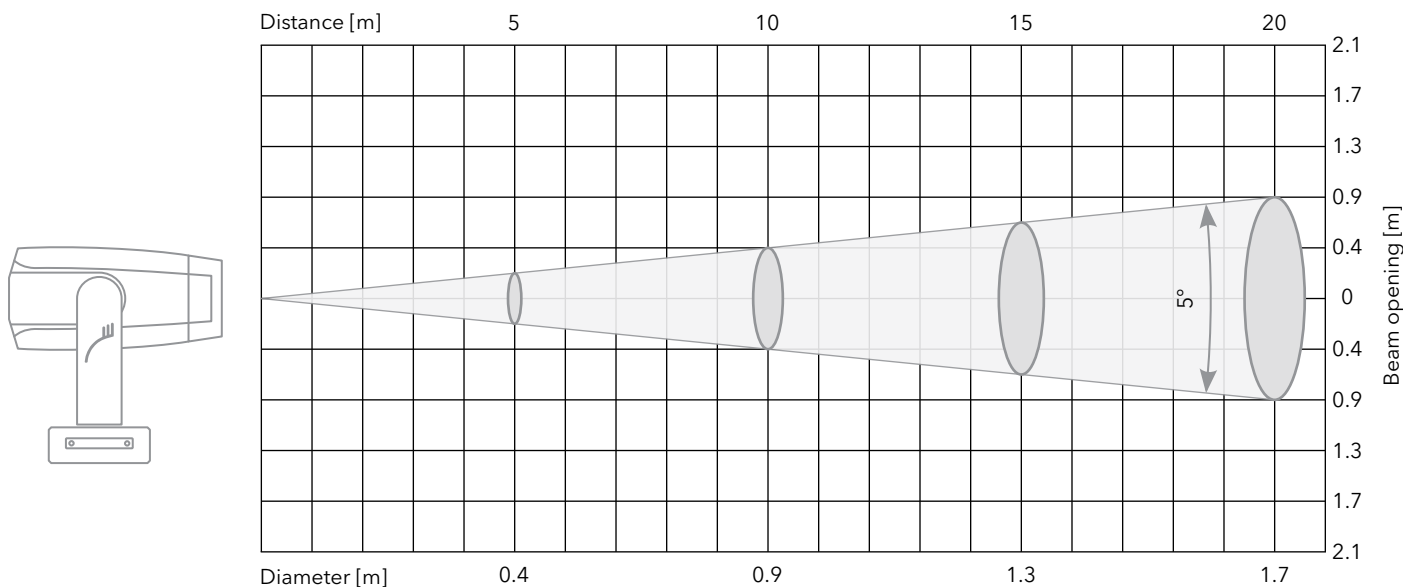


# FORTE HP

## Photometric report

### Beam angle 5° - Min. zoom - CRI 70

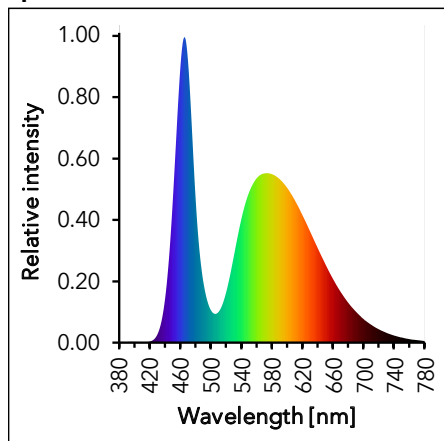
Beam angle	Total lumen output (integrating sphere)	Total lumen output (goniophotometer)	Peak candela	Power
5°	17668 lm	16869 lm	2875000 cd	1245 W



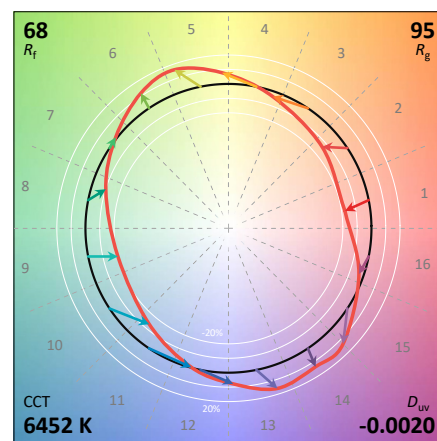
#### Center beam intensity [lx]/[fcd]; Total lumen output [lm] measured by goniophotometer

Distance	5 m	10 m	15 m	20 m	30 m	40 m	50 m	Total lumens
High Fan Mode	115000/10684	28750/2671	12778/1187	7188/668	3194/297	1797/167	1150/107	16869
Auto Fan Mode	113000/10498	28250/2625	12556/1166	7063/656	3139/292	1766/164	1130/105	16695
Quiet Fan Mode	82977/7709	20744/1927	9220/857	5186/482	2305/214	1297/120	830/77	12259

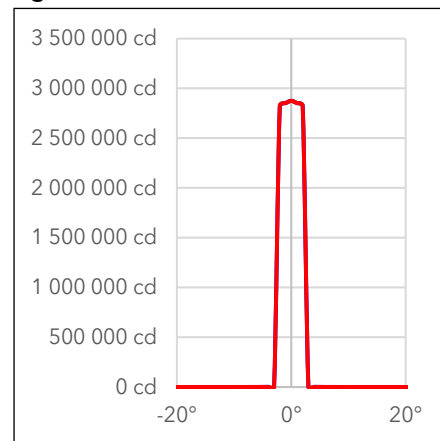
#### Spectrum



#### TM-30



#### Light distribution



Color temperature	<b>CCT</b>	6452
Color Deviation from Black	<b>Duv</b>	-0.0020
Color Coordinate CIE 1931	<b>x</b>	0.3147
	<b>y</b>	0.3211
Color Coordinate	<b>u</b>	0.0203
	<b>v</b>	0.3095

Color rendering index	<b>CRI</b>	70
Red component	<b>CRI R9</b>	-25
Color fidelity	<b>TM30 Rf</b>	68
Color gamut	<b>TM30 Rg</b>	95
Television consistency Index	<b>TLCI</b>	43

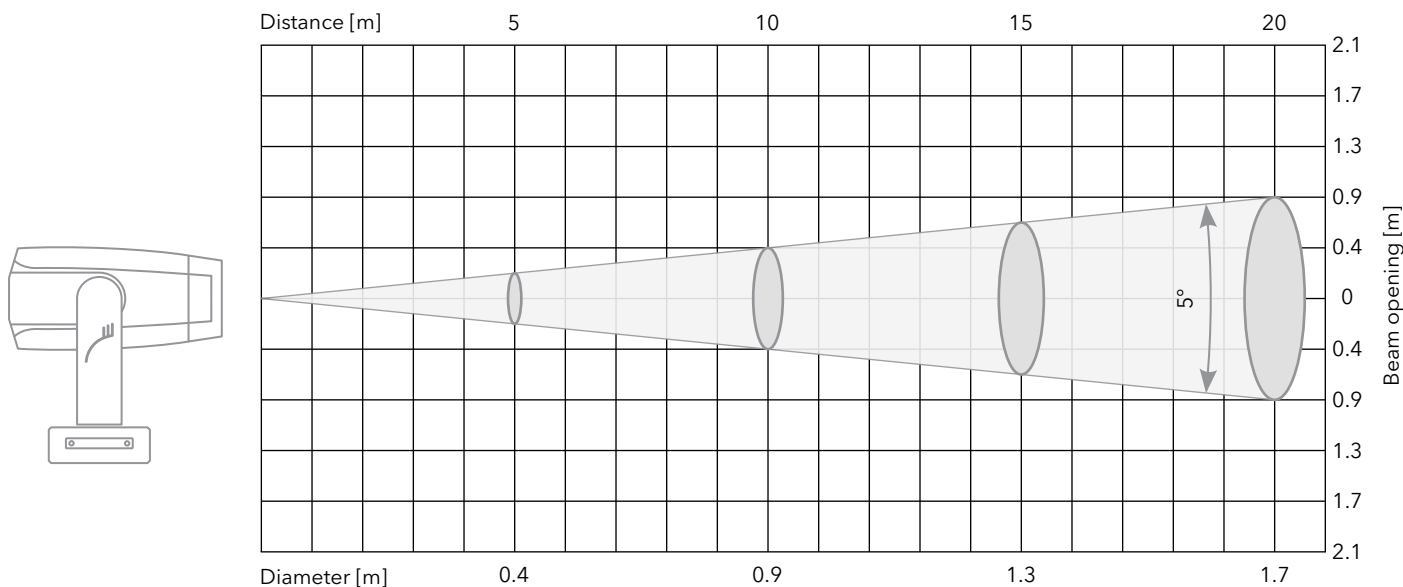
Fixture settings: DMX mode: 1; Fans: High; Dimmer curve: Square Law; Shutter: Open; Dimmer: Open; No effect in light beam  
Measurement date: 01.04.2021

# FORTE HP

## Photometric report

### Beam angle 5° - Min. zoom - CRI 80

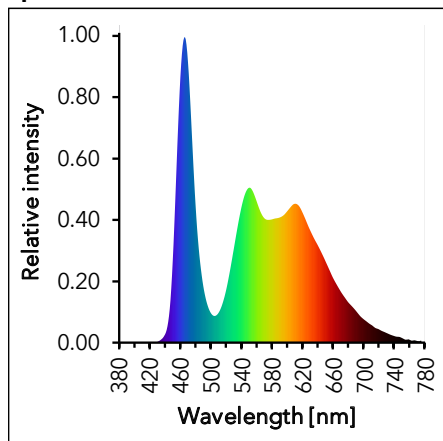
Beam angle	Total lumen output (integrating sphere)	Total lumen output (goniophotometer)	Peak candela	Power
5°	14572 lm	13913 lm	2365000 cd	1245 W



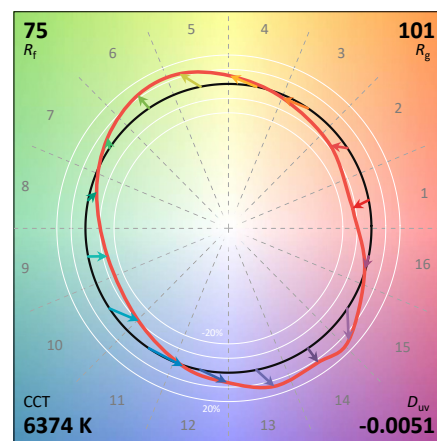
#### Center beam intensity [lx]/[fcd]; Total lumen output [lm] measured by goniophotometer

Distance	5 m	10 m	15 m	20 m	30 m	40 m	50 m	Total lumens
High Fan Mode	94600/8789	23650/2197	10511/977	5913/549	2628/244	1478/137	946/88	13913
Auto Fan Mode	91300/8482	22825/2121	10144/942	5706/530	2536/236	1427/133	913/85	13391
Quiet Fan Mode	67043/6228	16761/1557	7449/692	4190/389	1862/173	1048/97	670/62	9833

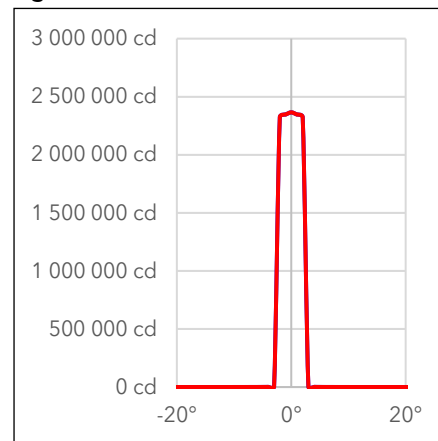
#### Spectrum



#### TM-30



#### Light distribution



Color temperature	<b>CCT</b>	6374
Color Deviation from Black	<b>Duv</b>	-0.0051
Color Coordinate CIE 1931	<b>x</b>	0.3166
	<b>y</b>	0.3170
Color Coordinate	<b>u</b>	0.2052
	<b>v</b>	0.3082

Color rendering index	<b>CRI</b>	79
Red component	<b>CRI R9</b>	11
Color fidelity	<b>TM30 Rf</b>	75
Color gamut	<b>TM30 Rg</b>	101
Television consistency Index	<b>TLCI</b>	58

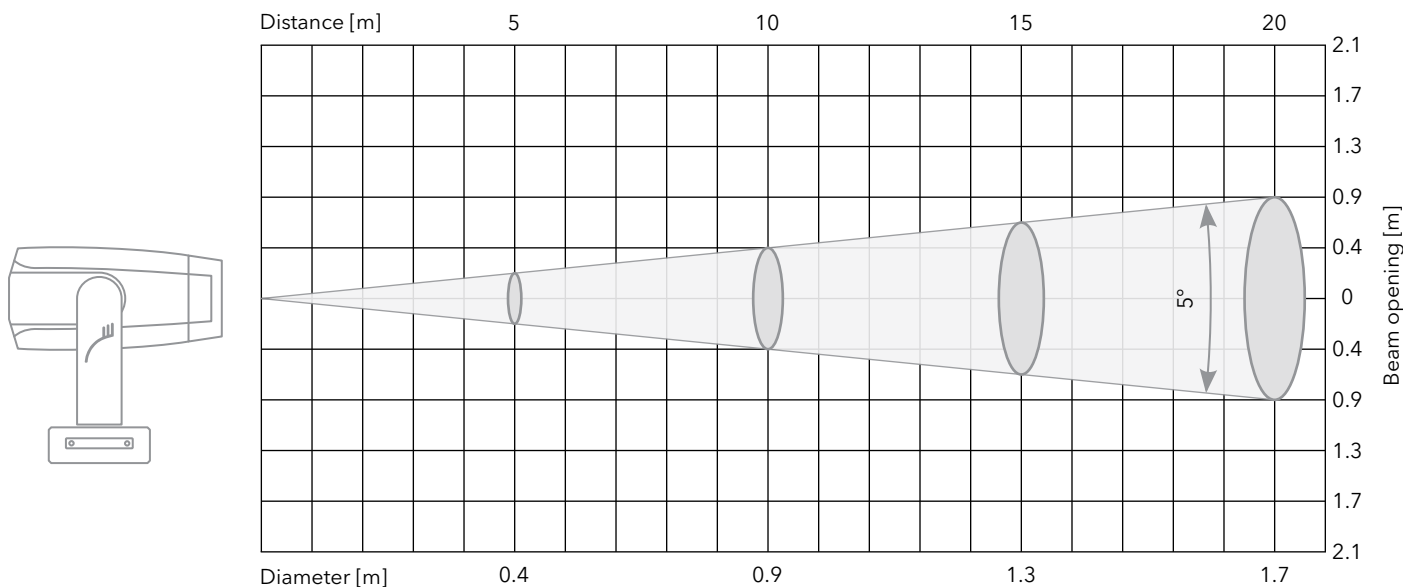
Fixture settings: DMX mode: 1; Fans: High; Dimmer curve: Square Law; Shutter: Open; Dimmer: Open; No effect in light beam  
Measurement date: 01.04.2021

# FORTE HP

## Photometric report

Beam angle 5° - Min. zoom - CRI 90

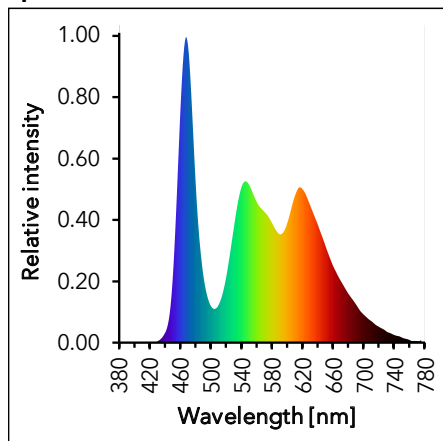
Beam angle	Total lumen output (integrating sphere)	Total lumen output (goniophotometer)	Peak candela	Power
5°	12568 lm	12000 lm	2057500 cd	1245 W



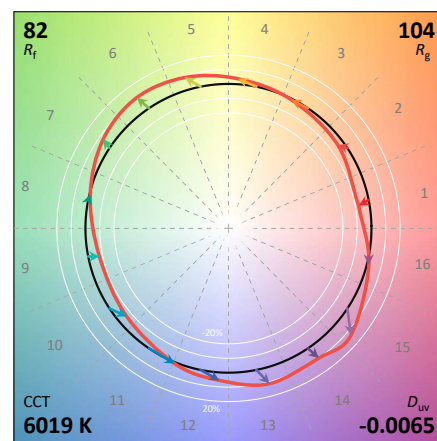
Center beam intensity [lx]/[fcd]; Total lumen output [lm] measured by goniophotometer

Distance	5 m	10 m	15 m	20 m	30 m	40 m	50 m	Total lumens
High Fan Mode	82300/7646	20575/1911	9144/850	5144/478	2286/212	1286/119	823/76	12000
Auto Fan Mode	80000/7432	20000/1858	8889/826	5000/465	2222/206	1250/116	800/74	11826
Quiet Fan Mode	58745/5458	14686/1364	6527/606	3672/341	1632/152	918/85	587/55	8684

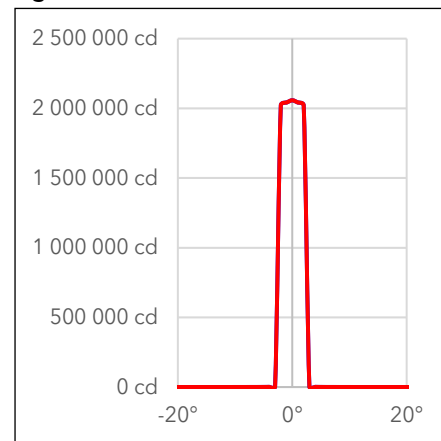
Spectrum



TM-30



Light distribution



Color temperature	<b>CCT</b>	6019
Color Deviation from Black	<b>Duv</b>	-0.0065
Color Coordinate CIE 1931	<b>x</b>	0.3225
	<b>y</b>	0.3200
Color Coordinate	<b>u</b>	0.2082
	<b>v</b>	0.3099

Color rendering index	<b>CRI</b>	86
Red component	<b>CRI R9</b>	41
Color fidelity	<b>TM30 Rf</b>	82
Color gamut	<b>TM30 Rg</b>	104
Television consistency Index	<b>TLCI</b>	71

Fixture settings: DMX mode: 1; Fans: High; Dimmer curve: Square Law; Shutter: Open; Dimmer: Open; No effect in light beam  
Measurement date: 01.04.2021

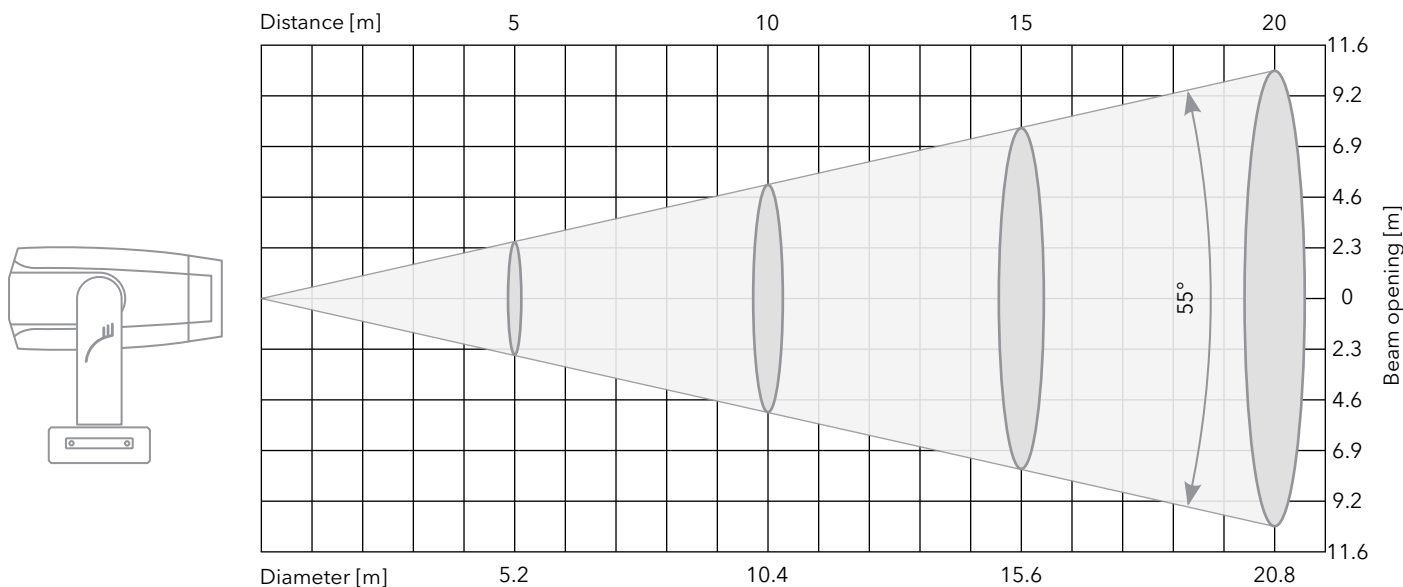


# FORTE HP

## Photometric report

Beam angle 55° - Max. zoom - CRI 70

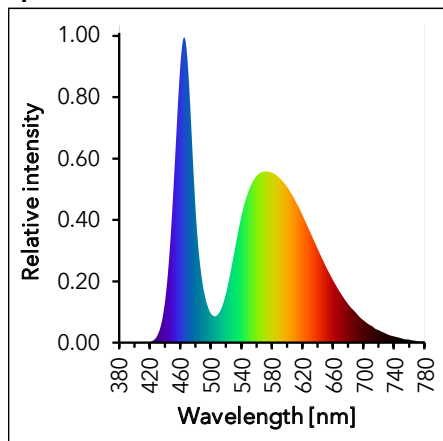
Beam angle	Total lumen output (integrating sphere)	Total lumen output (goniophotometer)	Peak candela	Power
55°	50433 lm	40607 lm	63000 cd	1245 W



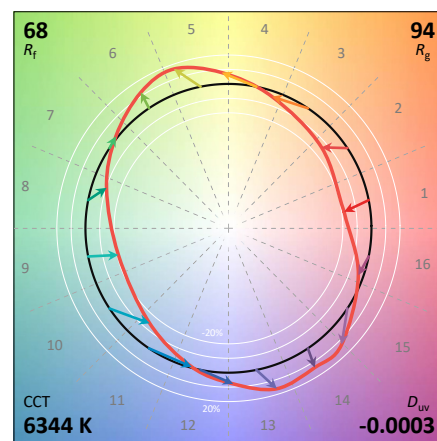
Center beam intensity [lx]/[fcd]; Total lumen output [lm] measured by goniophotometer

Distance	5 m	10 m	15 m	20 m	30 m	40 m	50 m	Total lumens
High Fan Mode	2520/234.1	630/58.5	280/26	157.5/14.6	70/6.5	39.4/3.7	25.2/2.3	40607
Auto Fan Mode	2490/231.3	622.5/57.8	276.7/25.7	155.6/14.5	69.2/6.4	38.9/3.6	24.9/2.3	40191
Quiet Fan Mode	1593/148	398.3/37	177/16.4	99.6/9.2	44.3/4.1	24.9/2.3	15.9/1.5	25708

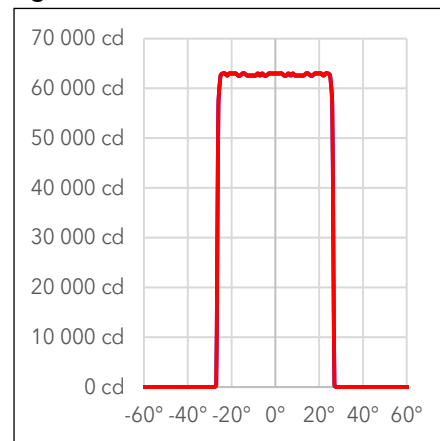
### Spectrum



### TM-30



### Light distribution



Color temperature	<b>CCT</b>	6344
Color Deviation from Black	<b>Duv</b>	-0.0003
Color Coordinate CIE 1931	<b>x</b>	0.3161
	<b>y</b>	0.3255
Color Coordinate	<b>u</b>	0.2015
	<b>v</b>	0.3113

Color rendering index	<b>CRI</b>	68
Red component	<b>CRI R9</b>	-32
Color fidelity	<b>TM30 Rf</b>	68
Color gamut	<b>TM30 Rg</b>	94
Television consistency Index	<b>TLCI</b>	42

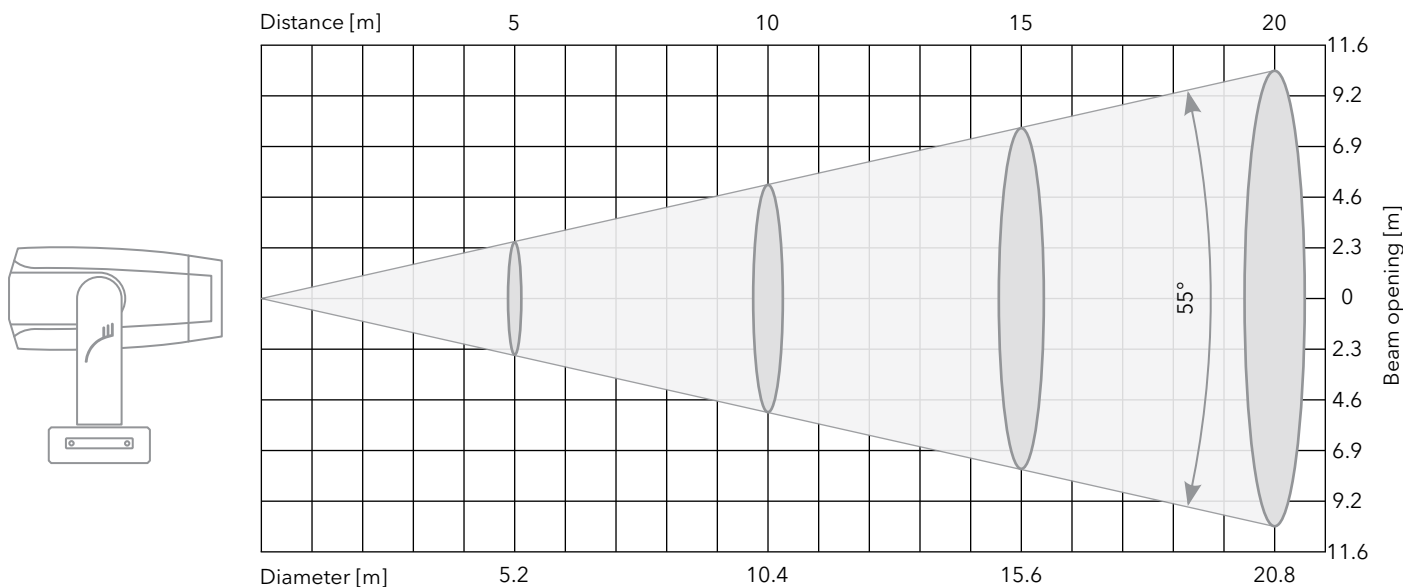
Fixture settings: DMX mode: 1; Fans: High; Dimmer curve: Square Law; Shutter: Open; Dimmer: Open; No effect in light beam  
Measurement date: 01.04.2021

# FORTE HP

## Photometric report

Beam angle 55° - Max. zoom - CRI 80

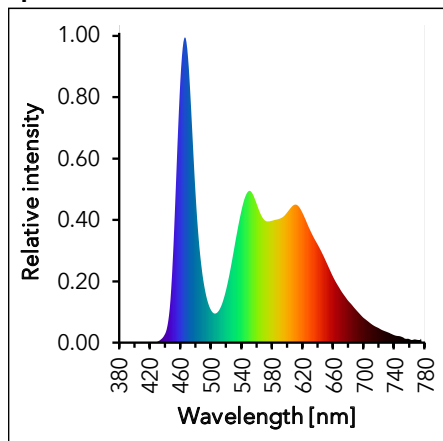
Beam angle	Total lumen output (integrating sphere)	Total lumen output (goniophotometer)	Peak candela	Power
55°	40138 lm	32318 lm	50000 cd	1245 W



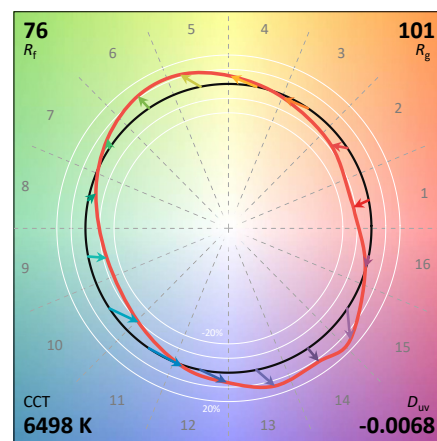
Center beam intensity [lx]/[fcd]; Total lumen output [lm] measured by goniophotometer

Distance	5 m	10 m	15 m	20 m	30 m	40 m	50 m	Total lumens
High Fan Mode	2000/185.8	500/46.5	222.2/20.6	125/11.6	55.6/5.2	31.3/2.9	20/1.9	32318
Auto Fan Mode	1992/185.1	498/46.3	221.3/20.6	124.5/11.6	55.3/5.1	31.1/2.9	19.9/1.9	31489
Quiet Fan Mode	1274/118.4	318.5/29.6	141.6/13.2	79.6/7.4	35.4/3.3	19.9/1.8	12.7/1.2	20142

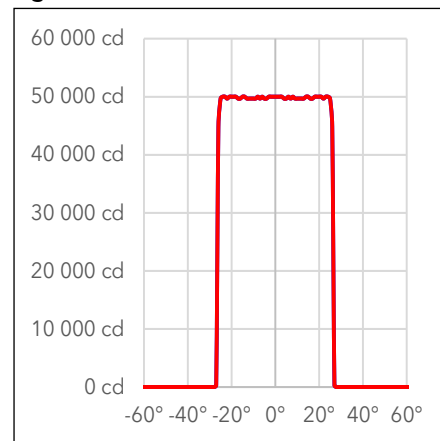
### Spectrum



### TM-30



### Light distribution



Color temperature	<b>CCT</b>	6498
Color Deviation from Black	<b>Duv</b>	-0.0068
Color Coordinate CIE 1931	<b>x</b>	0.3151
	<b>y</b>	0.3124
Color Coordinate	<b>u</b>	0.2060
	<b>v</b>	0.3064

Color rendering index	<b>CRI</b>	80
Red component	<b>CRI R9</b>	18
Color fidelity	<b>TM30 Rf</b>	76
Color gamut	<b>TM30 Rg</b>	101
Television consistency Index	<b>TLCI</b>	60

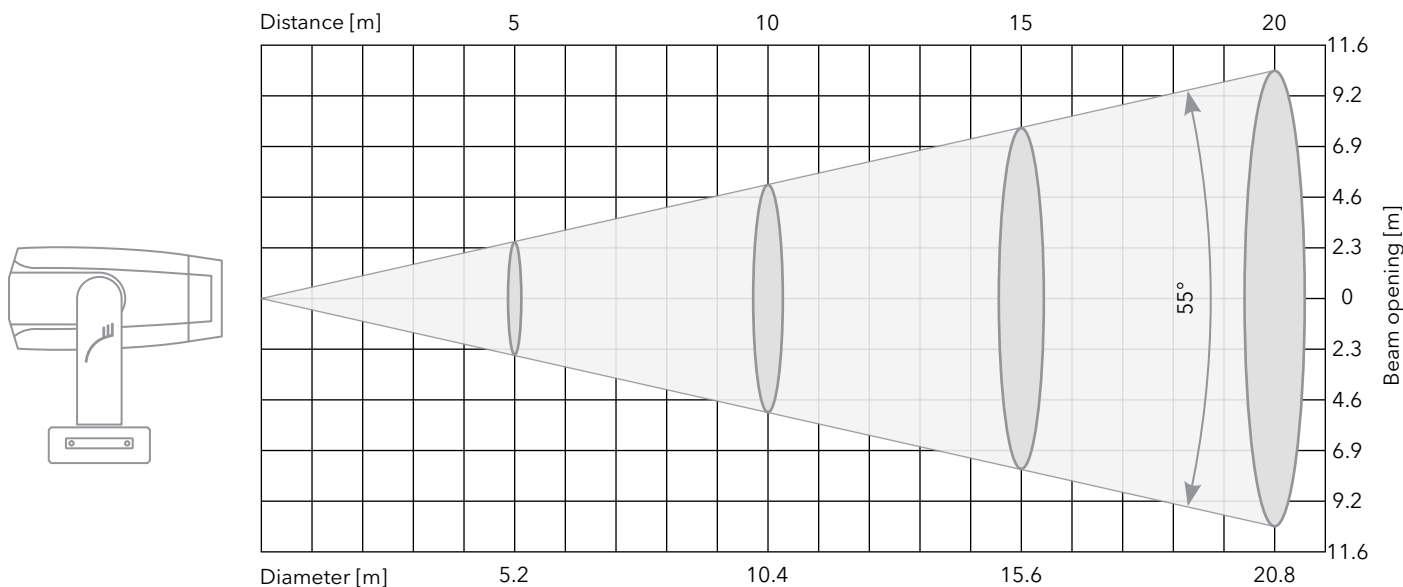
Fixture settings: DMX mode: 1; Fans: High; Dimmer curve: Square Law; Shutter: Open; Dimmer: Open; No effect in light beam  
Measurement date: 01.04.2021

# FORTE HP

## Photometric report

Beam angle 55° - Max. zoom - CRI 90

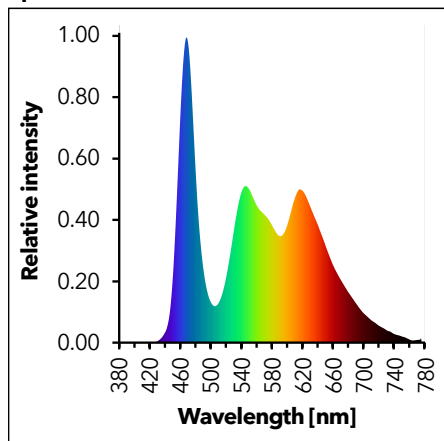
Beam angle	Total lumen output (integrating sphere)	Total lumen output (goniophotometer)	Peak candela	Power
55°	34479 lm	27761 lm	43000 cd	1245 W



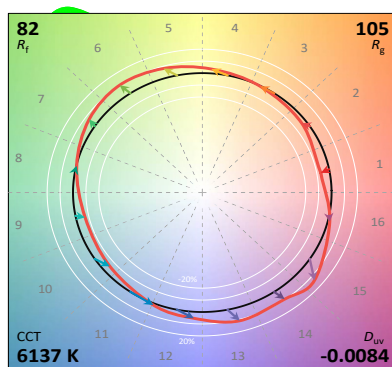
Center beam intensity [lx]/[fcd]; Total lumen output [lm] measured by goniophotometer

Distance	5 m	10 m	15 m	20 m	30 m	40 m	50 m	Total lumens
High Fan Mode	1720/159.8	430/39.9	191.1/17.8	107.5/10	47.8/4.4	26.9/2.5	17.2/1.6	27761
Auto Fan Mode	1680/156.1	420/39	186.7/17.3	105/9.8	46.7/4.3	26.3/2.4	16.8/1.6	26932
Quiet Fan Mode	1075/99.9	268.8/25	119.4/11.1	67.2/6.2	29.9/2.8	16.8/1.6	10.8/1	17227

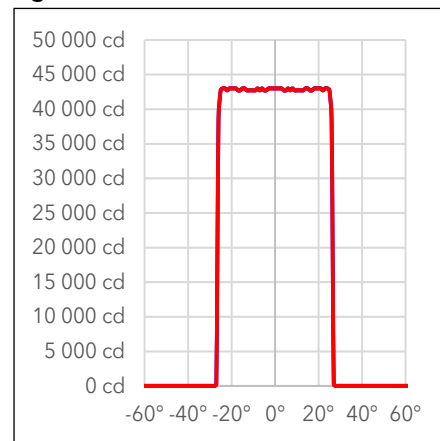
### Spectrum



### TM-30



### Light distribution

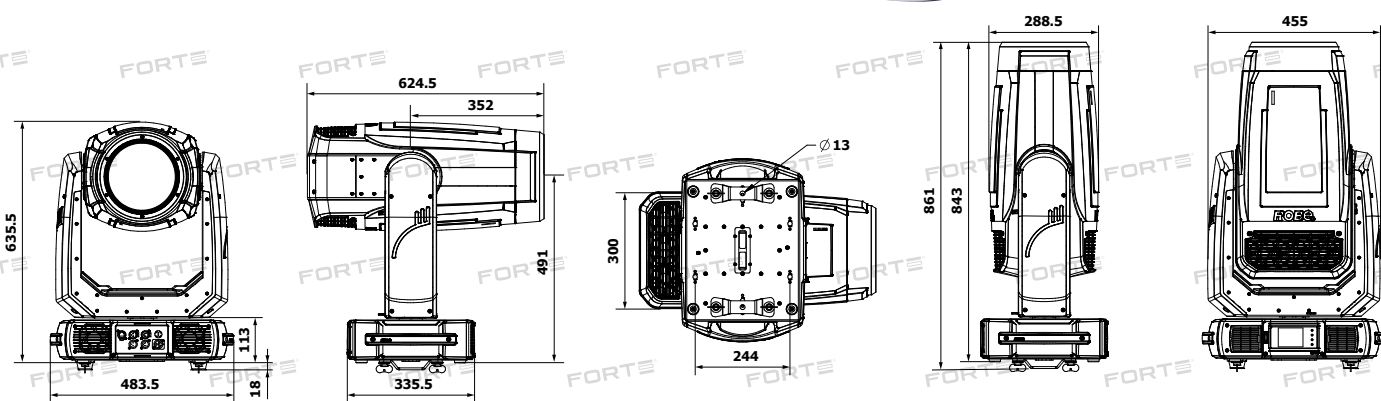


Color temperature	<b>CCT</b>	6137
Color Deviation from Black	<b>Duv</b>	-0.0084
Color Coordinate CIE 1931	<b>x</b>	0.3208
	<b>y</b>	0.3149
Color Coordinate	<b>u</b>	0.2091
	<b>v</b>	0.3079

Color rendering index	<b>CRI</b>	88
Red component	<b>CRI R9</b>	49
Color fidelity	<b>TM30 Rf</b>	82
Color gamut	<b>TM30 Rg</b>	105
Television consistency Index	<b>TLCI</b>	74

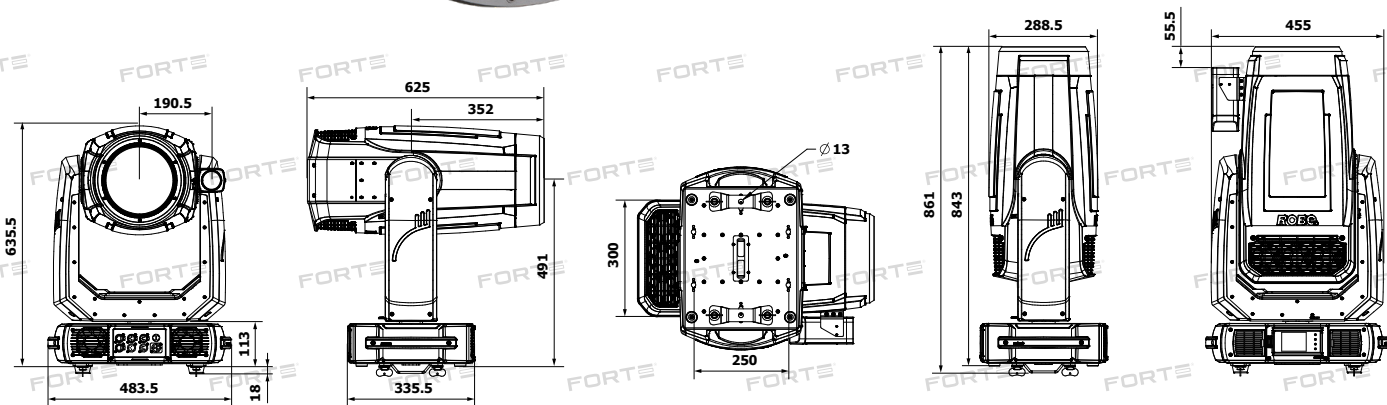
Fixture settings: DMX mode: 1; Fans: High; Dimmer curve: Square Law; Shutter: Open; Dimmer: Open; No effect in light beam  
Measurement date: 01.04.2021

**FORTE<sup>®</sup>**





# FORTE® FS

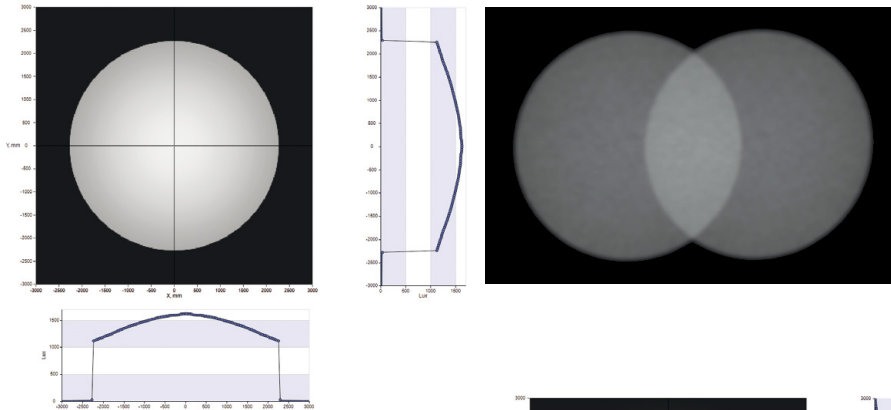


## Hot-Spot

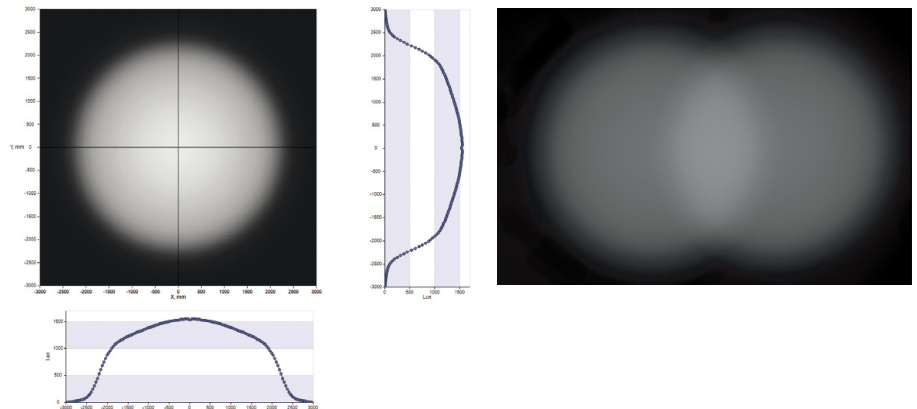
FORTE® produces a beautifully even, flat field of light. Whilst ideal for most applications, the perfect field makes it difficult to achieve smooth, continuous washes of light when the beam edges of multiple fixtures are overlapped.

By introducing our unique, patented, 6:1 ratio Hot-Spot lens, we can alter the field characteristics creating a centre weighted, peaked beam. With the addition of the frost filter, you can now effortlessly achieve silky smooth washes. This exclusive lens further enhances the feature rich FORTE®, making it the most versatile fixture available.

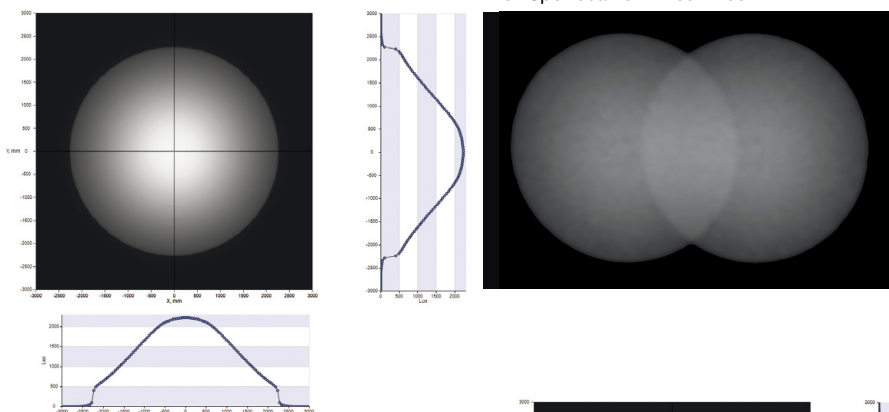
Flat field beams without Frost



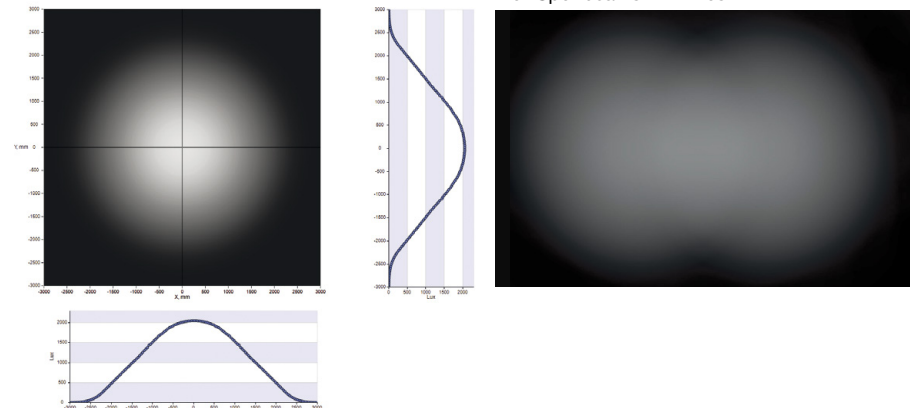
Flat field beams with Frost



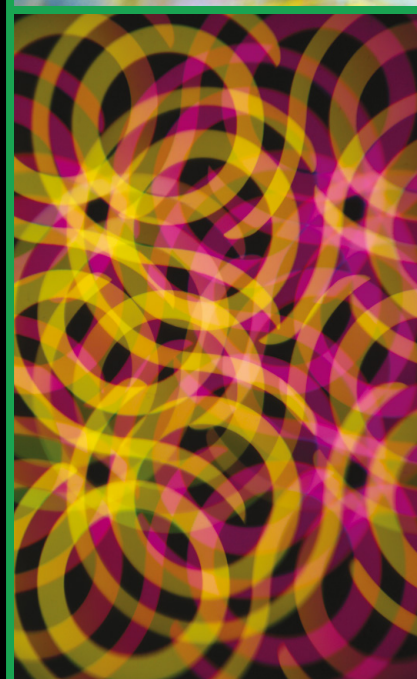
Hot-Spot beams without Frost



Hot-Spot beams with Frost









# FORTE<sup>®</sup>

## TRANSFERABLE ENGINE



### Packaging

Cardboard - 620 x 600 x 1070 mm

Single Top Loader Case - 745 x 600 x 880 mm

Dual Top Loader Case - 1450 x 600 x 880 mm



[www.robe.cz](http://www.robe.cz)



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