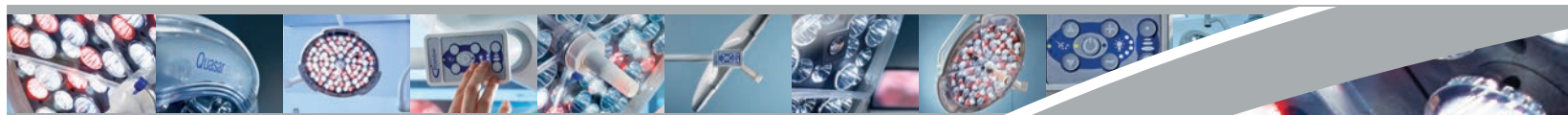


Quasar® eLite

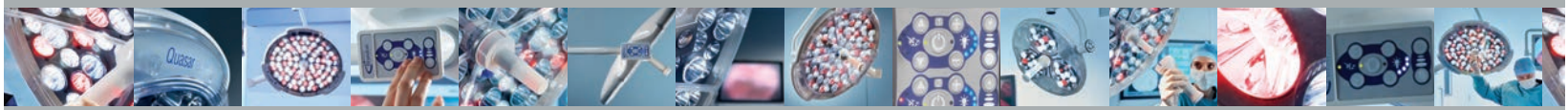
High Performance Surgical Lighting



HD
LED®

Quasar® eLite

Unique Benefits



Brandon Medical is a UK designer and manufacturer of world-leading equipment for operating theatres, critical care areas and primary care institutions. For 75 years, Brandon Medical has provided healthcare professionals with reliable, high-quality and affordable medical equipment. Continuous investment in research and development of our products allows us to meet the ever-changing needs of our customers, the healthcare industry and the patients it serves.



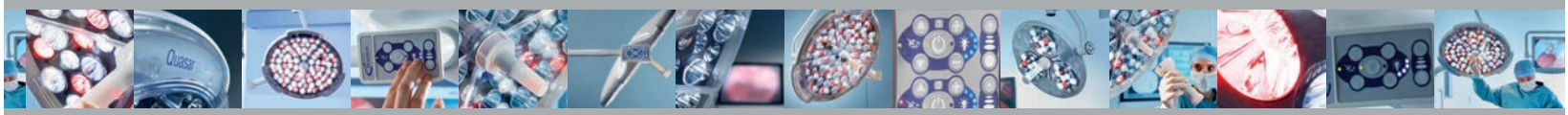
British Design and Technology

Quasar® eLite has been designed by Brandon Medical in the United Kingdom, with inputs from leading product designers and practicing surgeons. Quasar® eLite incorporates collaborative research and technology outputs funded by the European Commission and performed by world-renowned technology partners.

Quasar® eLite range of surgical and clinical lighting uses patented HD-LED lighting technology to provide you with exceptional performance, as well as unique design to minimise infections.

Brandon Medical offers a range of models and mounting structures to suit any operating theatre needs and configurations.





Why Quasar® eLite?

Near Perfect Colour Rendition with Red Balance Control

For the best visualisation of tissue during surgery.

Fat Beam Technology

One of the largest light beams of any current product with high intensity across the full beam width.

Unique Comfort Halo

A soft halo of light to reduce eye strain from high contrasts of light intensity.

Designed to Minimise Infections

Easy to clean, sealed light head, remote controls and anti-microbial coatings.

HD-SDI Camera “Inside”

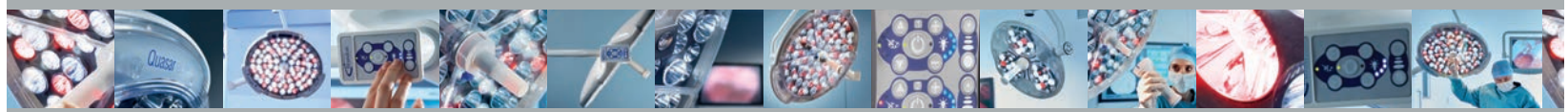
Integrated cameras are fully enclosed inside the light head for cleanliness and reduced cost.

Premium Quality Movement

Low weight light head mounted on easily installed arm system with adjustable stem which can be easily re-configured and with reverse polarity protection.

Quasar® eLite

High Performance Surgical Lighting

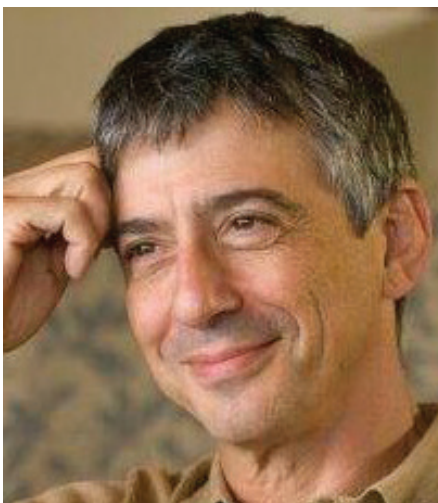


Colour Shadows

Quasar® eLite uses carefully placed reflectors to eliminate colour separation or 'colour shadows' normally associated with combining different coloured LEDs.

Why Red LEDs?

Red light is crucial to see small differences in tissue. Quasar® eLite combines red and white LEDs to provide the optimum balance between efficiency and colour rendition.



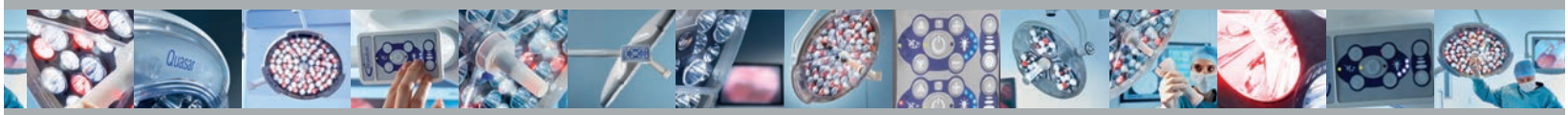
Prof. Jonathan Sackler
(FRCS, FACS)
Clinical Director, Brandon Medical

“ Surgeons need “good lighting” but we are largely unaware what makes a surgical light “good”. Since working with Brandon Medical, I have learned that it’s about the colour of the light, the uniformity of the light field and the ability to adjust the colour balance, not just about how bright it is! It’s amazing how much research, knowledge and technology Brandon use in the design of their OR lights.”



Red Balance

Enhanced Red II	Enhanced Red I	Optimum
3,100°K	3,300°K	3,700°K



Perfect Light (HD-LED)

Quasar® eLite is the only surgical light with near perfect colour rendition across the full visible spectrum. It features one of the highest R_g colour rendition of any product and ensures strong and vibrant visualisation of tissues.

UCV Integration

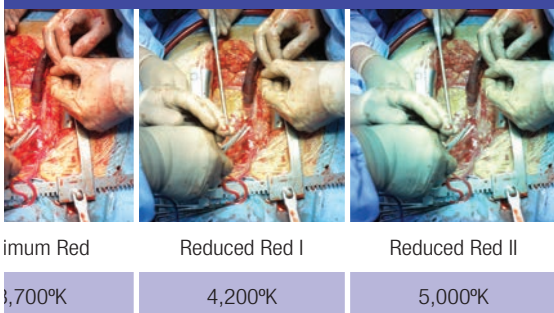
Quasar® eLite is designed to work with all UCV ceilings, with minimum air turbulence and thermal lift. The lights have been independently tested to DIN 1946 Part 4 (12-2008) and comfortably exceed the requirements.

Red Balance Control

A unique feature to Quasar® eLite, Red Balance Control, provides the user with the option to adjust the balance of red light to match their own optical colour response. This allows the user to fine-tune the light ensuring minimal eye strain by making the light do the work instead of the eye.

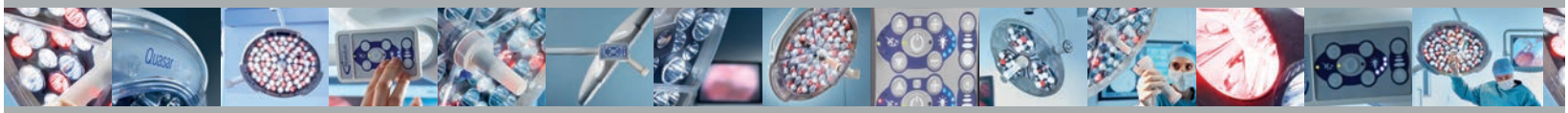


Red Balance Control



Quasar® eLite

High Performance Surgical Lighting



Fat Beam Technology

Quasar® eLite provides the very best light beam quality of any other product. Higher light flux ensures the biggest beams of light in the business, bigger illuminated fields and more light across the full width of the illuminated area.

- High light intensity across the full illuminated area for uniform vision
- Large wound sites can be easily examined
- Beam size is adjustable to user preference

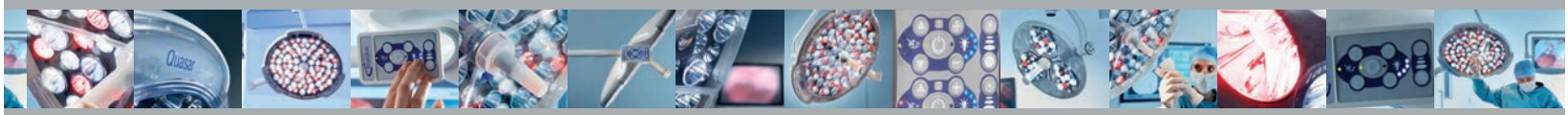
Why Red LEDs?

Red light is crucial to see small differences in tissue. Quasar® eLite combines red and white LEDs to provide the optimum balance between efficiency and colour rendition.

Comfort Halo

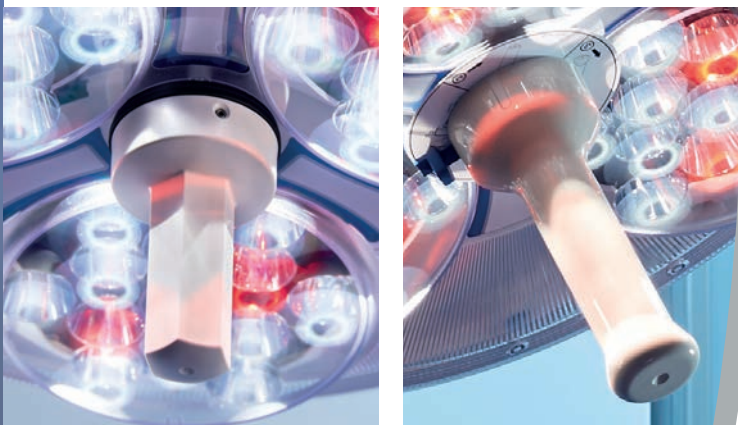
Quasar® eLite has been specifically designed to reduce eye strain for the user. Their unique Comfort Halo forms an intermediate corona to create a more gradual change in contrast between the area illuminated by the operating light and general theatre lighting.





Light Head Options:

- Qe60 Major/Satellite Light Head
- Qe6H Major Light Head with integrated video camera
- Qe30 Major/Satellite Light Head
- Qe3H Major Light Head with integrated HD-SDI video camera
- Qe10 Satellite only Light Head



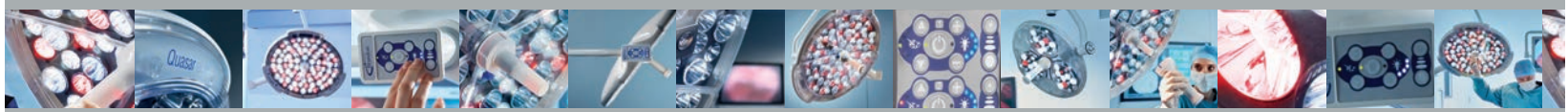
2 Handle Options:

Choose either the standard re-sterilisable handle covers, or our handle for disposable covers..



Quasar® eLite

Audio-Video



HD-SDI Camera System 'Inside'

Quasar® eLite can be personalised to include optional features such as HD Cameras that are fully embedded into the lamp head. The HD-SDI system produces outstanding picture quality on large monitors and provides as foundation for Brandon Medical's Symposia® systems. Optional 4K cameras are available as part of Symposia® as well.

Elimination of 'Visual Banding'

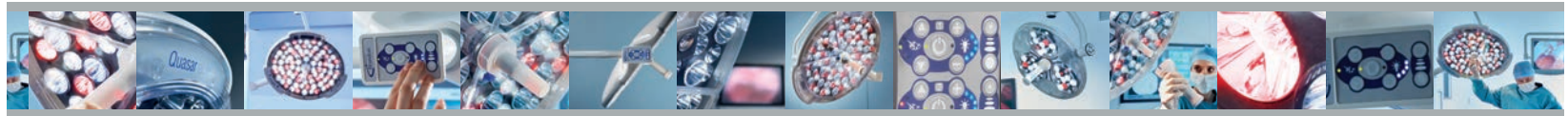
High definition cameras can detect the modulation frequencies of LED lights. This causes visual horizontal bands on the display monitors.

Quasar® eLite eliminates visual bands by accurately synchronising the frequencies of the LED modulation and the shutter speed of the HD camera system.

Symposia View® Monitor Carrier

- Symposia-View Single Vesa
- Symposia-View Single Vario
- Symposia-View Duo Swivel
- Symposia-View Duo Swivel Tilt
- Symposia-View Space Port & Cemor





Designed to Minimise Infections

Quasar® eLite has been designed to minimise infections. Anti-microbial additives are used to destroy harmful bacteria. The smooth, continuous surfaces are easy to wipe clean, with split lines kept to a bare minimum.

The Quasar® eLite Light head is sealed against the ingress of dirt and liquids to prevent contamination, whilst the central handle with removable sterile cover allows for easy positioning.

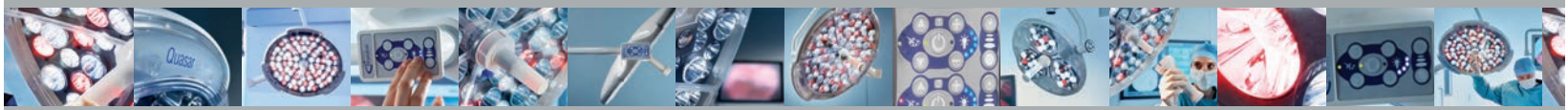


Dr. Andrew Kemp
Consultant Infection Control Nurse

“
The surface of the lamp is easily the best I have seen to clean. The Quasar® eLite creates a significantly lower risk than any other operating lamp I have reviewed.
”

Quasar® eLite

User-Friendly



Manoeuvrability

Ergonomics have been a major factor in the design process of Quasar® eLite resulting in a light with unparalleled user benefits:

- Light head edges from 'virtual handles'
- Low-weight light head allows easy positioning
- 5 points of rotation plus extensive vertical movement
- Needle roller bearings suspension system

Robustness

- >60,000 hours LED Life
- Hard wearing, custom designed bearings
- Six individual light engines ensure continuous illumination in the event of module failure.

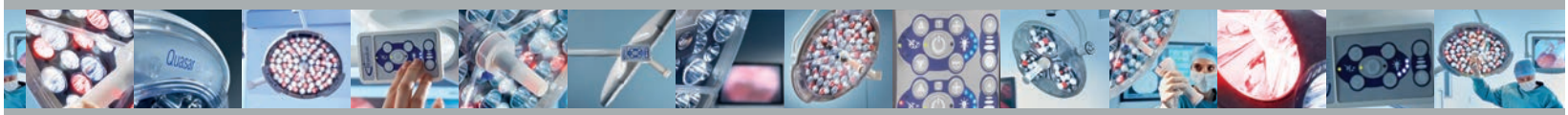
Minimal Environmental Impact

- The highest lighting performance with the smallest energy consumption
- Estimated CO2 reductions of at least 1.25 tonnes per year
- LED life more than 60,000 hours
- HD-LED does not use mercury, lead, cadmium, CFCs, POPS, VOCs or halogens



Isolated to I





Intuitive Lighting Controls

Quasar® eLite's ergonomic lighting control systems provide clear and intuitive adjustment of all lighting functions by the surgical team. This can be done at the light head, or outside of the sterile field via a secure wireless wall mounted control system.

Functions include:

- Electric lighting control for the light head keypad
- Focus (field size) adjustment from handle and keypad
- Sterilisable handle and wall mounted control
- Red Balance Control to optimise the visualisation of red tissue
- Light intensity control with endoscopy setting (5%)



i2i - a future-proof connectivity platform

Brandon Medical i2i is a range of solutions and products that address integration and control challenges for operating theatres through connectivity.

Brandon Medical decades-long philosophy of innovating in the space of turnkey acute care equipment has led to the launch of the SMART technological platform i2i - isolated to integrated.

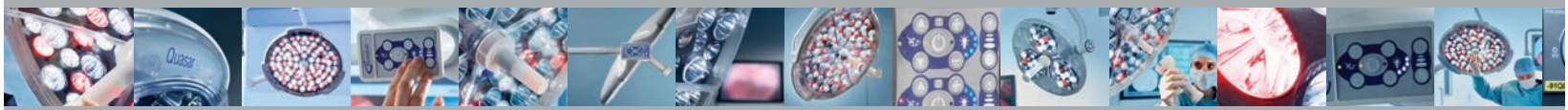
Smart infrastructure(networked devices) and IoT(internet of things) are widely known as the "digital hospital". i2i connects the devices in the operating theatre as well as the operating theatre itself to the hospital.

Supports modular and modern methods of construction (MMC)
Supports carbon footprint reduction.

Integrated



Quasar® eLite i2i



Quasar eLite Surgical Light integrated with i2i

i2i stands for “isolated to integrated” and has been developed by Brandon Medical R&D team to interconnect our products to the Intelligent Theatre Control Panel (iTCP), BMS or passed to the cloud for remote monitoring and data storage.

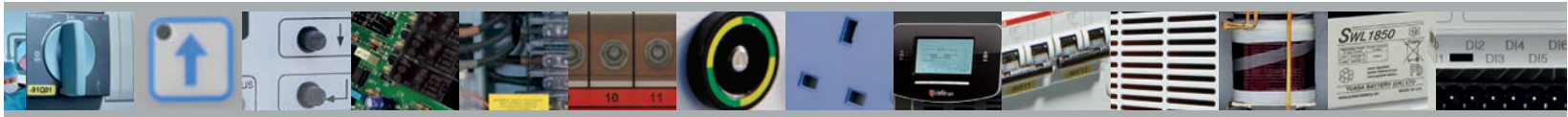
Connectivity to Mobile device applications will allow for more straightforward configuration, installation and servicing.

Making products i2i compatible will allow Brandon Medical to integrate with other devices around the OT rooms and hospitals and provide a better service to customers and partners.

Quasar eLite i2i provides diagnostics as a single system. The data from the i2i can be monitored via Medicontrol iTCP or 3rd party master device via industrial standard Modbus RTU reference.

The i2i (isolated to integrated) Brandon Medical cluster of communication technologies allows for data communication with the intelligent theatre control panel (iTCP) for reporting and scheduling self-test activities during empty theatre periods. It will enable the monitoring team to identify and highlight potential issues before the user is aware. This also allows the engineers to perform a first-point fix. The downtime of the operating theatres is reduced to a minimum which saves the hospital thousands of pounds per intervention and reduces the waiting time for patients to receive the needed lifesaving operation.

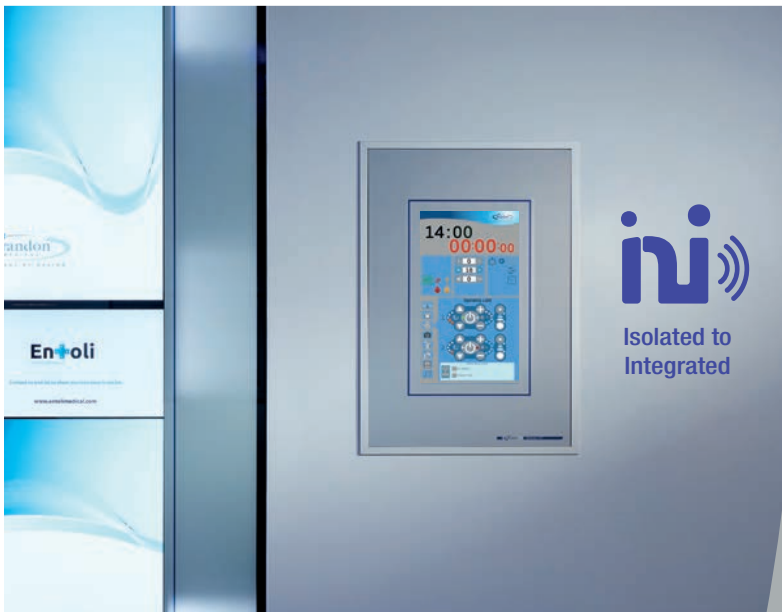




Intelligent Battery Emergency Power for Operating Lights

Surgical luminaries are one of the critical systems within the OR and require the highest level of power supply resilience. To ensure this each luminaire should have its own primary (mains) and secondary (battery backup) supply. In accordance with HD60364-7-710, BS7671-2018 (18th edition) and HTM06-01:2017, the surgical operating light must have a back up of 3 hours.

- Time and cost saving via automated test and battery maintenance.
- HTM 06-01 compliant.
- Modbus communication.
- Intelligent theatre control panel (iTCP) connection.
- Easy to monitor and configure with Near Field Communication (NFC).
- Collects data for secure reports via Android app.



Brandon Medical's iBEPU system consists of:

- An integrated power supply unit (PSU).
- A separate battery charger.
- 10-year design life batteries.
- High speed (static switch) changeover unit.
- Modbus communication to iTCP.



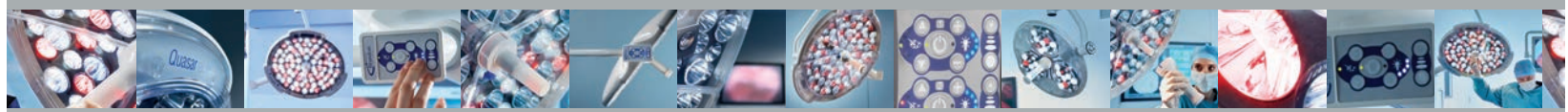
A GET THE APP

The primary supply unit (PSU) will provide the lamp with power under normal operating conditions. Should the primary supply suffer a mains failure or a catastrophic component failure, then the iBEPU will switch over to its own battery supply.

Through its associated app engineers can configure, maintain and provide reporting on the battery system.

Quasar® eLite

High Performance Clinical Lighting



Brandon Medical Quasar® eLite Clinical Range has been designed to fill a gap in the market where big surgical lights cause inconvenience in smaller operating rooms, but without compromising performance.

Slim, Compact and Powerful

Ultra slim and light-weight lamp head enables smooth, fast and precise positioning during procedures. Quasar eLite is a compact yet powerful surgical light with an impressive 160,000 Lux output.

Large Movement Range

Quasar eLite clinical range lamp heads are mounted on multimovement arm mechanisms. The lamp has four points of rotation and extensive vertical movement to allow easy positioning of the light beam from any angle.

HD-SDI Camera System Inside

Quasar® eLite can be personalised to include optional features such as HD Cameras that are fully embedded into the lamp head, improving infection control and reducing system costs for its users.

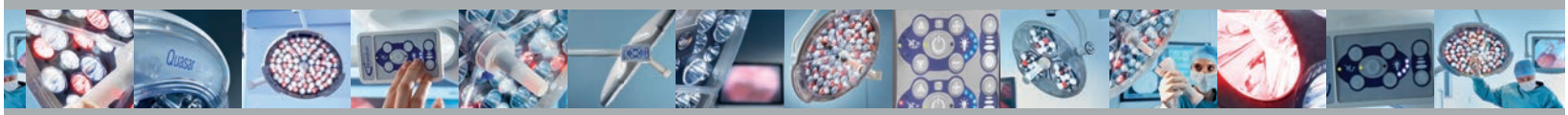
Economical Light with Long Life

Quasar eLite provides exceptional performance at a competitive price with minimal running costs. Using less than 50 watts of power and with >60,000 hours of LED life which equates to more than 20 years of normal use, Quasar eLite continually saves money on energy and maintenance.

Infection Control

The lamp head is sealed to protect from ingress of dirt and fluids. The smooth surfaces of the lamp head allow for easy disinfection. The lamp head is manoeuvred using a sterilisable handle.





Full Spectrum Colour Rendition

The surgical lighting has near perfect colour rendition across the full visible spectrum.

- Easy to distinguish small differences in tissue
- All the colours are strong and vibrant
- Reduced eye strain by making the light do the work instead of the eye

Red Balance Control

With the highest R9 red colour rendition, Quasar eLite provides optimum visualisation of red tissues.

- Enhanced visualisation of red tissues
- Improved differentiation between tissues of similar colour
- You can adjust the light colour to match your own optical colour response

Fat Beam Illumination

Higher light flux ensures bigger illuminated fields and more light across the full width of the illuminated area.

- High light intensity across the full illuminated area for uniform vision
- Avoids visual distraction by reducing high contrast in the illuminated area
- Adjust the beam size to suit your working area to eliminate peripheral distraction

Large Illuminated Area with Shadow Control

A large illuminated area of up to 320 mm diameter makes it easy to illuminate large areas of tissue to target the light onto the wound. By spreading the LEDs across the lighting surface, a much better distribution of light is provided from the lamphead. This enables excellent shadow control to under-light obstructions during procedures.

Environmentally Friendly

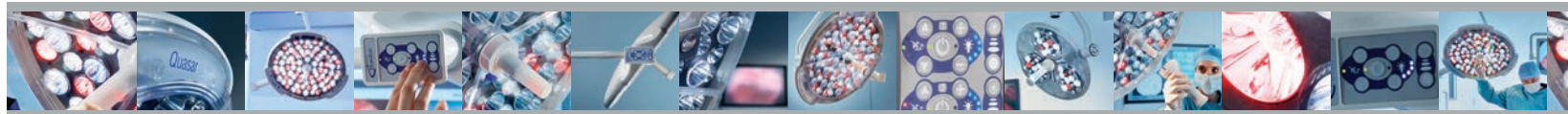
HD-LED lights use up to 70% less energy than conventional medical lighting.

HD-LED lights have the highest lighting performance with the smallest energy consumption.

LEDs are also mercury free, do not contain CFCs, POPs, VOCs, halogens or other harmful chemicals and are ROHS compliant

Quasar® eLite

Technical Data



Qe60 and Qe6H



Qe30



Qe10

Light Quality Characteristics	Qe60	Qe30	Qe10
Light Intensity (Lux)	160,000	160,000	100,000
Number of Light Sources	90	39	13
Light Field Diameter (d10 Distance of 1m)	220-426mm	164-294mm	149-270mm
Light Field Diameter (d50 Distance of 1m)	128-212mm	83-122mm	77-89mm
Beam Uniformity (d50/d10 Ratio)	58	51	52
Comfort Halo (at 1m)	2,000mm	1,500mm	N/A
Colour Rendition Index R_a	95	95	95
Colour Rendition (Red) R_g	95	95	95
Colour Temperature	3,100°K to 5,000°K (5 Steps)		3,500°K to 5,000°K (6 Steps)

Electrical & Mechanical Characteristics	Qe60	Qe30	Qe10
Nominal Power Consumption	37.5W	24.5W	13.2W
Radiant Energy	<3.31mW/m ² per Lux		
LED Life	>60,000 Hours		>50,000 Hours

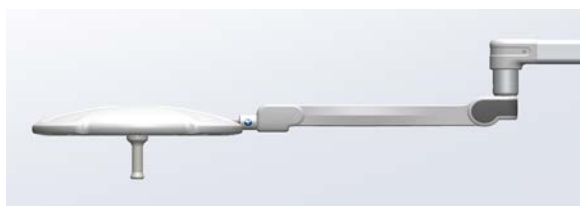
*Specifications may vary by +/-10%

Quasar® eLite is available in a variety of mounting combinations to suit the needs of the surgical environment. HD camera options can be integrated into the slim light head and a range of suspension arms are also available for the perfect integration in hybrid operating theatres and low ceiling theatres.

Standard Double Cardanic Yokes



Low Ceiling Yoke

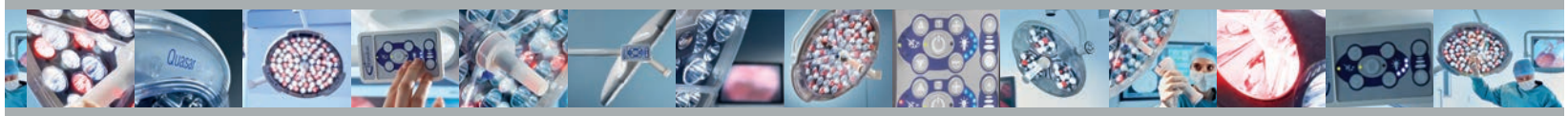


Single Cardanic Yoke



Quasar® eLite

Product Range Description



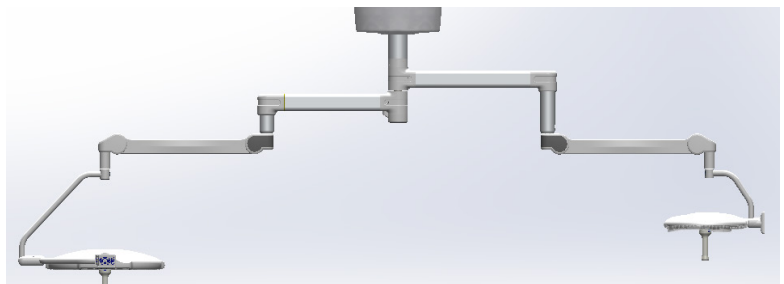
Part Number	Description
Qe30	Quasar® eLite Qe30 single lamphead light
Qe3010	Quasar® eLite Qe30 lamphead with Qe10 satellite light
Qe3030	Quasar® eLite Qe30 lamphead with Qe30 satellite light
Qe3C	Quasar® eLite Qe30 single lamphead with HD-SDI camera light
Qe3C10	Quasar® eLite Qe30 lamphead with HD-SDI camera and Qe10 satellite light
Qe3C30	Quasar® eLite Qe30 lamphead with HD-SDI camera and Qe30 satellite light
Qe303030	Quasar® eLite Qe30 lamphead and two Qe30 satellite examination lights
Qe60	Quasar® eLite Qe60 single lamphead light
Qe6030	Quasar® eLite Qe60 lamphead with Qe30 satellite light
Qe6060	Quasar® eLite Qe60 lamphead with Qe60 satellite light
Qe6H30	Quasar® eLite Qe60 lamphead with HD-SDI camera and Qe30 satellite light
Qe6H60	Quasar® eLite Qe60 lamphead with HD-SDI camera and Qe60 satellite light
Qe6C	Quasar® eLite Qe60 single lamphead with HD-SD camera light
Qe6C30	Quasar® eLite Qe60 lamphead with HD-SDI camera and Qe30 satellite light
Qe603030	Quasar® eLite Qe60 lamphead with two Qe30 satellite lights
Qe606030	Quasar® eLite Qe60 lamphead with Qe60 and Qe30 satellite lights
Qe606060	Quasar® eLite Qe60 lamphead with two Qe60 satellite lights

*Specifications may vary by +/-10%

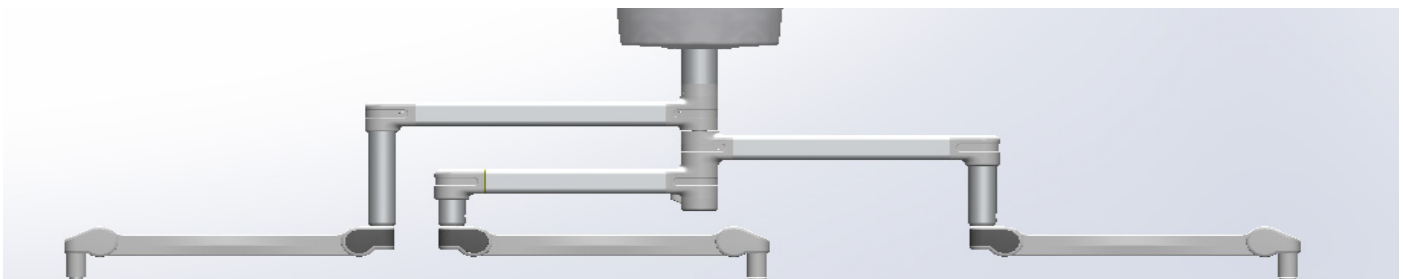
Single Arm System



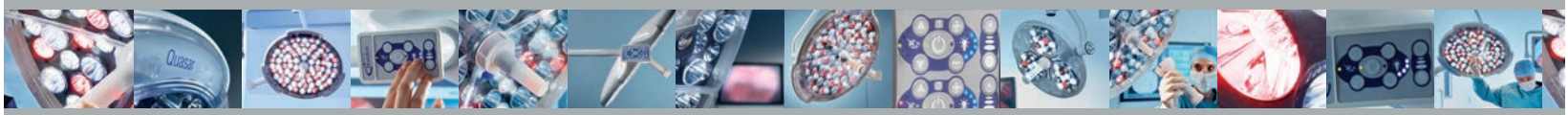
Double Arm System



Triple Arm System



Quasar® eLite Applications



Optimum lighting for surgical specialities

The Operating Theatre has dramatically changed: Minimally invasive surgery means that more equipment has to be present in the room, with complex audio-video solutions required, in addition to Medical IT, UPS, gases, specialised carts, etc.

According to recommendatory best practices, Quasar eLite range from Brandon Medical covers all the demands surgical specialities have on theatre lighting.

Smart Operating Theatre

Brandon Medical's cutting-edge equipment package designed with Modern Methods of Construction principles in mind. i2i - isolated to integrated - technology ensures intelligent technologies in the operating theatre to identify critical issues and potentially reduce the incidence of never events.



(HBN 26) Facilities for surgical procedures in acute general hospitals

Hybrid Operating Theatre

The hybrid operating theatre combines the conventional operating theatre with advanced medical imaging devices for minimally invasive and complex surgeries. Brandon Medical operating lights mounted on Titan central axis allow for a seamless system with monitors.



(HBN 26) Facilities for surgical procedures in acute general hospitals

Ultraclean Ventilation Operating Theatre

Brandon Medical's Quasar eLite is designed to not interfere with the ultraclean ventilation system airflow, ensuring the surgical field is not compromised by air turbulence.



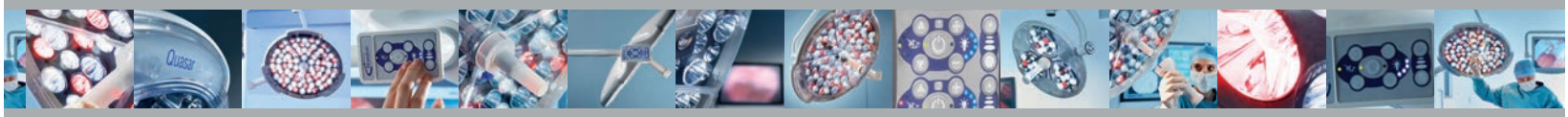
(HBN 26) Facilities for surgical procedures in acute general hospitals

Cardiac Operating Theatre

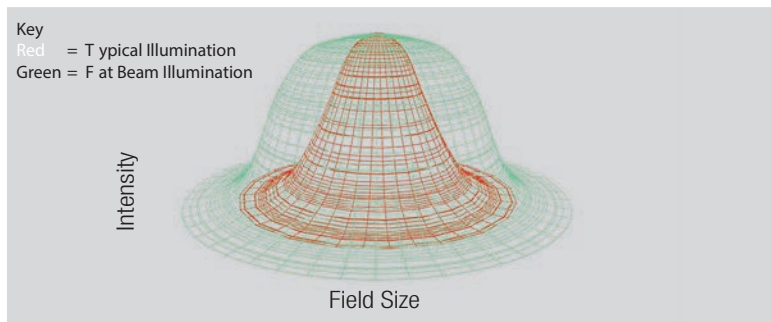
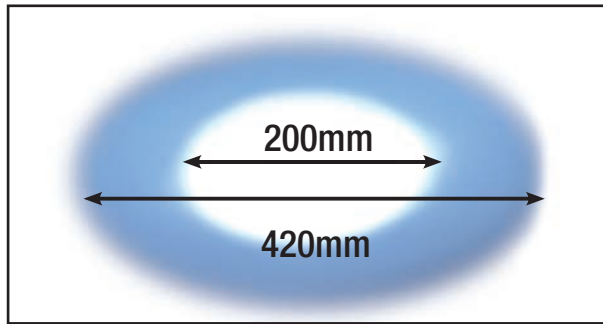
Cardiac surgery is a high-risk area where clinical space requires support equipment for two medical teams working on the patient at the same time. This requires one central ceiling-mounted operating light and two satellite lights.



Designing and planning cardiac facilities



Fat Beam Technology



- High light intensity across the full illuminated area for uniform vision
- Avoids visual distraction by reducing high contrast in the illuminated area
- Adjust the beam size to suit your working area to eliminate peripheral distraction

CRI

R_a

95

Full Spectrum Colour Rendition

R_1	R_2	R_3	R_4	R_5	R_6	R_7	R_8
99	97	93	93	98	96	94	92

Red

R_9

95

Colour Rendering Index R_a

Colour Rendering Index (R_a) is a measure of how well a light source reproduces colours.

Near Perfect Colour Rendition Across the Visible Spectrum R_1-R_8

HD-LED has near perfect colour rendition for all 8 colour measurements used to calculate general Colour Rendering Index (R_a). The "strong red" colour so important for visualisation of red tissues is not included in the R_a measurement.

Enhanced Red Balance R_9

R_9 indicates visible red colour reproduction which is a critical parameter for surgical lights.

Exceeding Standards

Brandon Medical is certified as BS EN ISO 13485:2016 and ISO 9001:2015 manufacturer, the quality standard for medical device manufacturers. Brandon Medical Quasar® eLite lights conform to IEC 60601-1, IEC 60601-1-2 and IEC 60601-2-41.



Award Winner 2019





Quasar® eLite is part of the Brandon Equipment Package.

- Operating Theatre Lights and Battery Back Up
- Minor Surgical Lights
- Examination Lights
- Theatre Control Panels
- IPS Isolated Power Supplies
- UPS Uninterruptible Power Supplies
- PACS Workstations
- Medical Gas Pendants and Accessories
- Ultra Clean Ventilation Canopies
- Operating Table and Accessories
- Digital Audio Video Solutions



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