bluephase®

Licence to cure

ivoclar vivadent®
passion vision innovation

bluephase is the first LED for every use

Every material, every indication, every time –
Only this unique combination gives you the licence to cure.

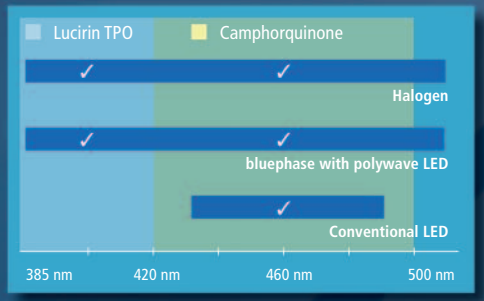
LEDs have revolutionised light curing and successfully introduced cordless polymerisation to the dental practice. For the first time ever, it has become possible to overcome the existing and well-documented limitations of emerging LED technology. Developed for unlimited operation, bluephase is suitable for every material and for every clinical situation imaginable.

Every material due to polywave
The ability to polymerise all dental materials depends on the light emitted. To date, conventional LED lights have not been suitable for universal use due to the narrow emission spectrum. Like halogen lights, the innovative bluephase achieves a broad light spectrum of 385-515 nm. With the new polywave LED, developed specifically for dental needs, the bluephase light is suitable for all light initiators and thus its use is unrestricted.

Every indication due to constant cooling
Due to the virtually noiseless built-in fan, bluephase allows lengthy periods of operation without clinical compromise. As opposed to annoying interruptions and irritating waiting times, bluephase on the contrary facilitates extensive cementation procedures involving multi-unit restorations, including the consecutive placement of up to 10 veneers.

Every time due to Click & Cure
A cordless design based on state-of-the-art lithium polymer batteries offers the ultimate in mobility. Limitless freedom of movement is achieved via the ingenious Click & Cure function. The handpiece can be connected with the power cord of the charging base to enable continuous operation – no matter if the battery is discharged.

	Every material (385 - 515 nm)	Every indication (continuous use of at least 10 minutes	Every time (optional mains operation)
bluephase	✓	✓	✓
L.E.Demetron II*	–	✓	–
Demi*	–	✓	–
SmartLite IQ2*	–	–	–
SmartLite PS*	–	–	–
Elipar FreeLight 2*	–	–	–



«Another obstacle for LED technology continues to be narrow spectral output that will not cure all current resin formulations.»
(CRA, Vol. 30, Issue 2, February 2006)

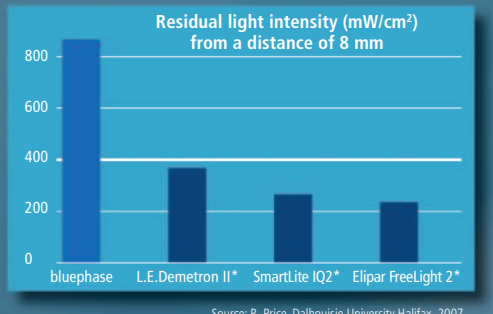
«Some of them [LED], especially the simpler versions, have significant drawbacks … [like] the inability to cure beyond 3-4 minutes.»
(REALITY, Vol. 20, 2006)

«It is a good idea to select a light that comes with an extra battery or optional AC cord.»
(The DENTAL ADVISOR, Vol. 21, No. 6, July/August 2004)

bluephase ...

The rotating 10 mm light probe allows excellent accessibility to all restored areas. Even large cavities can be entirely irradiated due to the large diameter of the light probe. Consequently, multiple polymerisation cycles for MOD restorations are a thing of the past.

Special optics help the intense light of the bluephase to penetrate deep into the material to be polymerised. In critical situations, an exceptionally high light intensity is available. Even when curing from a greater distance – for example in the proximal box – excellent polymerisation results are achieved.



Source: R. Price, Dalhouisie University Halifax, 2007

2011 The Dental Advisor Top Light-Curing Unit

2010 The Dental Advisor Top Light-Curing Unit

2009 The Dental Advisor Top Light-curing Unit

Dental Product Shopper Best Product 2008

reddot design award honourable mention 2008

... cures by far the best!

The high light intensity of the powerful bluephase helps to reach large curing depths with the shortest possible curing times. Composites and adhesives can be cured in 10 seconds. Complete polymerisation is also achieved in challenging treatment procedures, such as the polymerisation of luting composites used to cement indirect restorations.

Source: R&D Ivoclar Vivadent AG, Schaan, 2007

polywave®

bluephase – Licence to cure

Competence in Composites®

The main objective of polymerisation is to achieve adequate curing of the material. According to the Total Energy Concept, an energy dose of maximum 16,000 mWs/cm² is required for composites. The curing time and above all the intensity of the polymerisation light play a decisive role in the placement of long-lasting restorations.

Consistency in construction

For fast curing times, bluephase generates an impressive light intensity of 1,200 mW/cm². In order to ensure consistently high clinical quality at the same time, the intensity of every single unit has been set to a tightly specified tolerance of ± 10 %. Conventional LED units on the other hand exhibit extreme performance fluctuations and therefore involve the risk of inadequate polymerisation.

Proof of performance

The new bluephase radiometer is suitable for checking the light intensity of all LED curing lights with a circular light probe. Since the built-in line sensor of the bluephase meter takes into account the radiating surface, it is possible to accurately determine the actually available light intensity for the first time using a radiometer. The intelligent line sensor is the only one of its kind to determine both the emitted power and the diameter of the light emission window.

Total Energy Concept

Dose (mWs/cm²)	16,000	16,000	16,000
Light intensity (mW/cm²)	400	800	1,600
Curing time (s)	40	20	10

Source: P. Koran, R. Kürschner, 1998

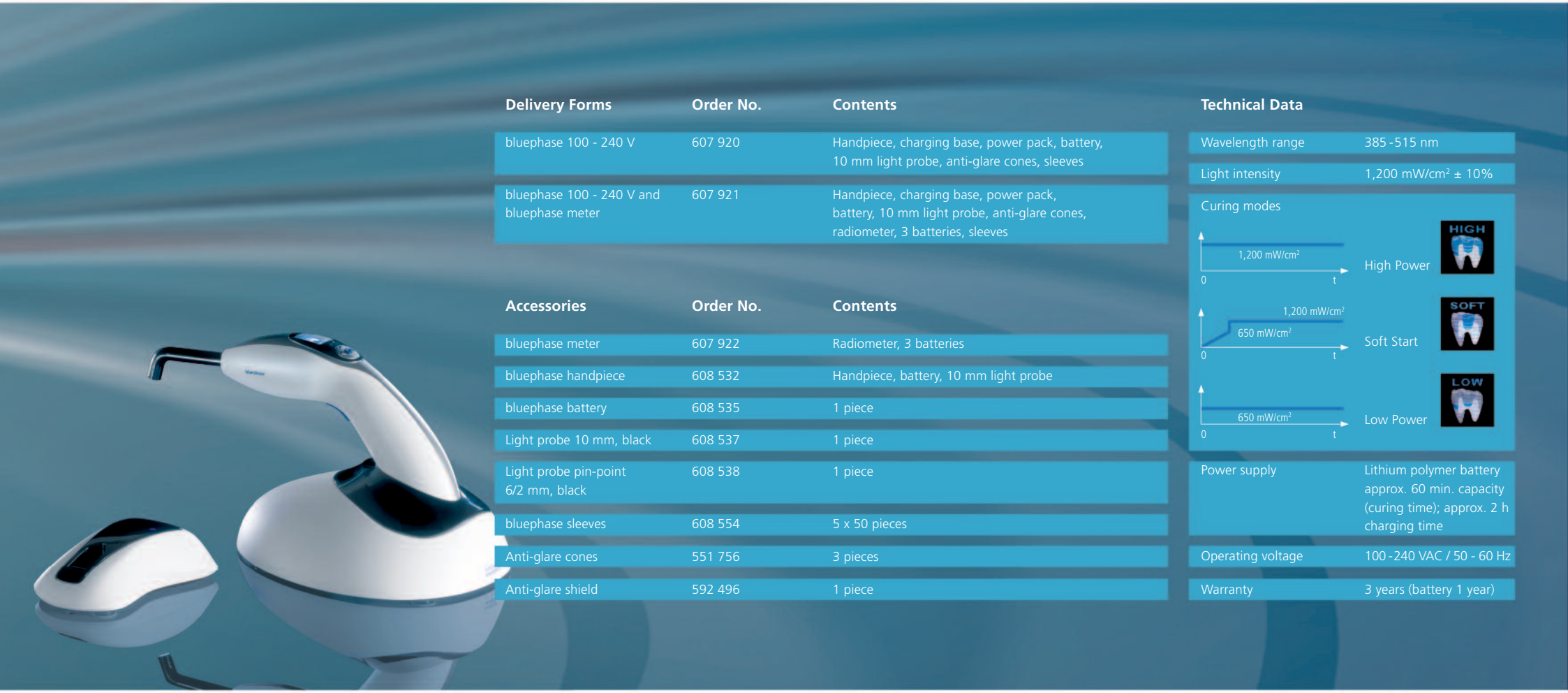
Field test on light intensity (mW/cm²)

	Supplier's specifications	Measured mean value	Units with an intensity < 70 % than stated by supplier
bluephase (predecessor model)	1,100 (± 10 %)	1,066	0 %
L.E.Demetron I*	1,000	699	67 %
SmartLite PS*	950	927	0 %
Elipar FreeLight 2*	1,000	602	58 %

Source: C.-P. Ernst, Johannes Gutenberg University Mainz, 2006

* L.E.Demetron is a registered trademark of KerrHawe;
Demi is a registered trademark of KerrHawe;
SmartLite is registered trademark of Dentsply;
Elipar is a registered trademark of 3M ESPE.

Delivery Forms & Technical Data



Delivery Forms	Order No.	Contents
bluephase 100 - 240 V	607 920	Handpiece, charging base, power pack, battery, 10 mm light probe, anti-glare cones, sleeves
bluephase 100 - 240 V and bluephase meter	607 921	Handpiece, charging base, power pack, battery, 10 mm light probe, anti-glare cones, radiometer, 3 batteries, sleeves

Accessories	Order No.	Contents
bluephase meter	607 922	Radiometer, 3 batteries
bluephase handpiece	608 532	Handpiece, battery, 10 mm light probe
bluephase battery	608 535	1 piece
Light probe 10 mm, black	608 537	1 piece
Light probe pin-point 6/2 mm, black	608 538	1 piece
bluephase sleeves	608 554	5 x 50 pieces
Anti-glare cones	551 756	3 pieces
Anti-glare shield	592 496	1 piece

Technical Data	
Wavelength range	385 - 515 nm
Light intensity	1,200 mW/cm² ± 10%
Curing modes	
Power supply	Lithium polymer battery approx. 60 min. capacity (curing time); approx. 2 h charging time
Operating voltage	100 - 240 VAC / 50 - 60 Hz
Warranty	3 years (battery 1 year)

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