



Advantages of LED Power Light (OptiLight Power Light) in Daily Dentistry

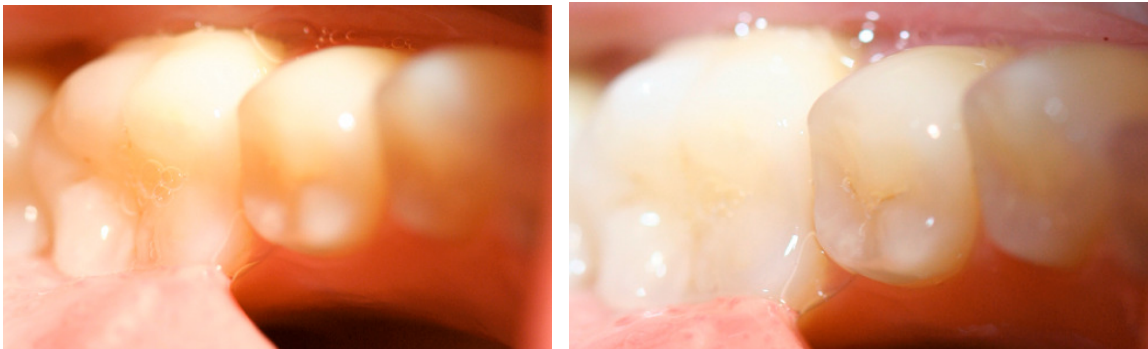
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With the new OptiLight, general practitioners as well as high-class specialists have an easy-adaptable power light to fit most any glasses or loupe system. The minimal weight of 15 g (0.5 oz.) and the battery system, size of half a cigarette pack, can be easily adapted for the dentist's convenience.

Diagnostic Possibilities

Caries

For a valid optical caries diagnosis, the tooth has to be dry and the working field bright. With the use of OptiLight power light, sensitivity is increased and an excellent light in the working field gives a shadow-free zone to do all you need. The brightness (12,000 Lux) with a distance of 35 cm helps you to detect initial caries even in needle tip size.



Checking of Preparation and Filling Cavities

The bright light diminishes the shadow part in case of deep preparation, which is of special advantage for distal facets or posterior teeth. A cumbersome and time-consuming changing of the position of the patient's head for adapting the operation light is avoided. In addition to checking with the probe, the light gives you the possibility to check the borders of fillings.

Optical Judgement of Carious Dentine

When excavating profound caries, very often the question is what part of the discoloured dentine shall be removed and what part shall be kept untouched. The cold white light will indicate the degree of discolouration giving the dentist a better judgement compared to the traditional light.

Find the Cracks

The "cracked tooth syndrome" is a common disease, but with the conventional light often difficult to be recognized. The OptiLight Power Light white light gives the crystalline enamel hard substances an optical light breaking effect, so that inclusions and fractures can be seen much better as well as cracks, which are very often hard to see.



Control of Difficult-to-Reach Areas

The additional light source helps to judge difficult-to-reach areas and surfaces, especially with interdental control of preparation and filling. This decreases the actual working time efficiently.

Conclusion

- OptiLight power light optimises the possibility for visual caries detection.
- The additional power light keeps the working field shadow-free.
- The additional high percentage of white light gives a better interpretation of the clinical picture.
- The better visibility increases the probability of detection of structural defects in teeth or fillings.

Daily Work with OptiLight Power Light

Is agreeably recognised by dentists due to the super light weight (15 g = 0.5 oz.) and the easy adaptation to existing systems. Dentists using glasses or loupe systems as well as those, who have no glasses, can easily use the OptiLight. The low voltage of 3 x 1.5 V guarantees many hours of working time. The lifetime of the LED system (bulb) is over 100,000 hours, corresponds to a dentist's lifetime.

Test Series at Dental Schools

The advantages of a better viewing could be proved by in vitro research.

Aim

Changing of the actual working time (decreasing) due to higher light intensity and a white light (shadow-free) with 12,000 Lux.

Materials and Methods

Tests were done with nanohybrid composites like Artemis, Tetric, EvoCeram (Ivoclar Vivadent) Filtek, Supreme (3 M Espe), the microhybrid composite Amelgon plus (Ultradent) and a flowable

composite Tetric flow (Ivoclar Vivadent). The test was done in phantom models with standardized MOD cavities in one testing series without OptiLight Power Light and subsequently with the OptiLight Power Light. The increment size was of 2 mm thickness.

Results

All cavities were done lege artis with good clinical results. There was no difference in the general working time.

Discussion

The use of OptiLight Power Light for large composite restorations will not result in a quality difference, a speed in hardening did not occur under clinical test conditions.

Impression of Testing Dentists

OptiLight Power Light is a low-cost, but decisive addition for working in conservative dentistry. Deep cavities or deep distal working areas were lighted extremely well. Less fatigue was felt at the end of a working day, especially in combination with loupe glasses. The money invested in OptiLight is invested with an excellent effect.

