



CHROMALIGHT DISPLAY

OPTIMAL AND LONG-LASTING LEGIBILITY

The Chromalight display emits a blue glow in dark conditions.

The hands, hour markers and other display elements of the Professional watches and most of the Classic watches in the Oyster Perpetual collection are coated or filled with a luminescent material exclusive to Rolex that guarantees optimal and long-lasting legibility.



CHROMALIGHT DISPLAY

In the dark, deep in a cave, or under water with low visibility, the wearer of a Rolex watch must be able to tell the time easily and with confidence. That is why Rolex uses a special luminescent material that makes its watches – aside from selected timepieces in the Classic category, for aesthetic reasons – visible in dark environments.

HIGH-PERFORMANCE LUMINESCENCE

In 2008, the brand introduced the innovative Chromalight display, which was unveiled on the Rolex Deepsea divers' watch. The hands, hour markers and other display elements produce a blue glow once the watch is plunged into darkness.

Exclusive to Rolex, the luminescent material used to coat or fill the different components emits a light that is exceptionally bright and long-lasting, far outperforming watchmaking norms. The luminosity duration of the Chromalight display is almost double that of a traditional phosphorescent material. The intensity of the luminosity is also more consistent over the entire emission time.

In 2021, Rolex further optimized the Chromalight display: the intensity of the blue glow emitted now lasts longer thanks to a new, innovative luminescent material. In daylight, the display elements also have a brighter white hue. The new-generation Explorer and Explorer II, presented the same year, were the first watches to benefit from the optimized Chromalight display, and the new luminescent material will gradually be introduced to other models in the catalogue.

MANUFACTURING PROCESS

The luminescent material begins life as an ultra-fine powder containing aluminium, strontium, dysprosium and europium, and is the result of a complex, delicate manufacturing process. For the material to emit the characteristic blue glow of the Chromalight display, a perfectly controlled high-temperature reaction is required. This reaction forms crystals, and it is the structure of these crystals that makes it possible to produce a blue glow. The material has phosphorescent properties, meaning that it is able to store light energy and release it slowly once darkness falls. The way in which the light is emitted involves the releasing of energy within the material, a phenomenon that produces photons – elementary particles that make up light. As a final step, the powder is mixed with liquid resin so that it can be applied by hand to the components. Great rigour and precision is required to master the exact quantity of material to use to achieve a perfectly uniform result that meets Rolex's stringent quality criteria.



CHROMALIGHT DISPLAY

The Chromalight display is today a key characteristic of the Professional watches in the Oyster Perpetual collection and, since 2015, also features on a large selection of Classic watches.