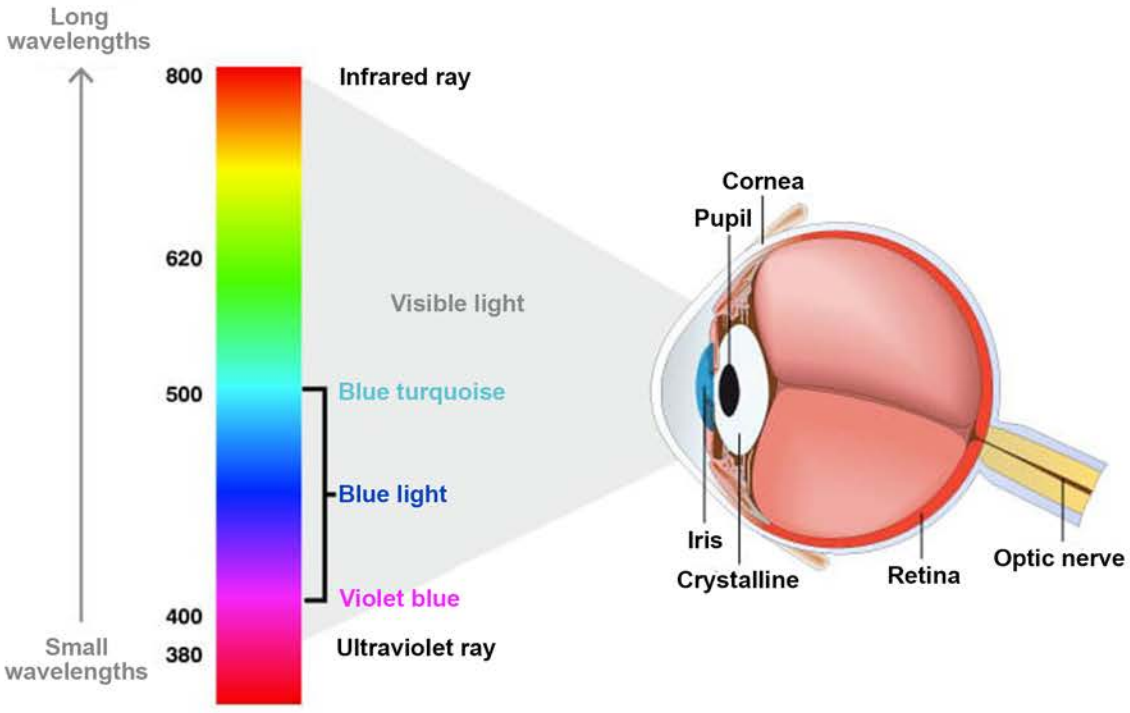
LED LIGHTING IN DIFFERENT DRIVING CONDITIONS

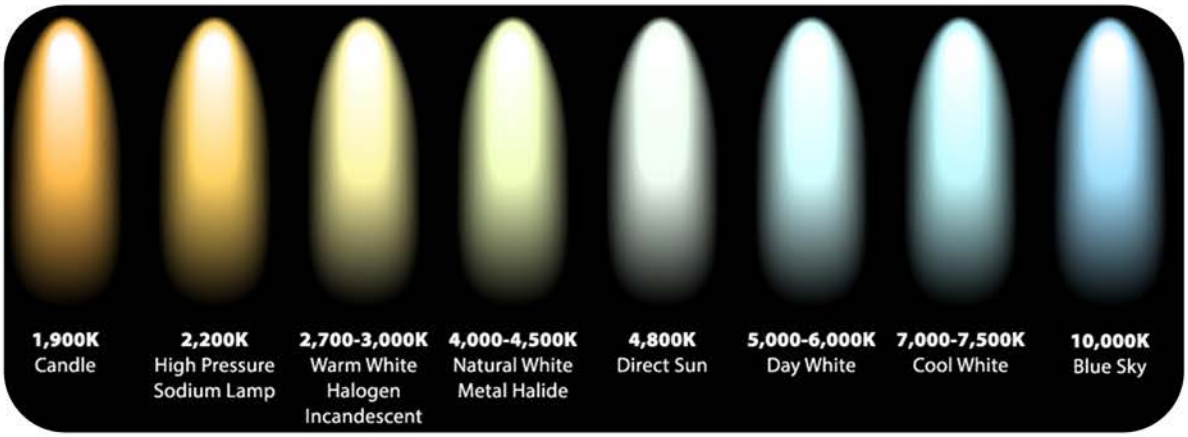
The ODX SNO-WY bulb was designed specifically for safety while snowmobiling. ODX, an automotive and powersports lighting manufacturer since 2007, has come to the conclusion that the visibility of a 6500 degree kelvin lighting colour is optimal in clear visibility conditions. However, during snow precipirations or fog, the 6500 degree Kelvin lighting deminishes visibility since the light reflects on them, thus creating a blinding wall in front of the snowmobile. After many years of research and development, we have found that a 3000 degree Kelvin light colour penetrates deeper through snow and fog without creating an opaque white wall. In addition, compared to a car that travels on level roads, a recreational vehicle travels on inconsistent paths with uneven surfaces. When a car is moving, it is easier to adjust the height of the headlights to limit the blinding of vehicles in the opposite direction. With a snowmobile on inconsistent surfaces, the headlight projection bounces which can cause glare hazards to oncoming drivers. The adaptation/dilation of the pupil of the human eye in a case of glare is amplified when using a spectrum greater than 4500 degrees Kelvin since it contains a greater quantity of blue light.



https://www.myblueprotect.com/informations-sur-la-lumiere-bleue-my-blue-protect/

COLOR SPECTRUMS

The ODX SNO-WY kit has 2 different color spectrums, 3000 degrees Kelvin (warm white) for the low beams, and 6500 degrees Kelvin (cool white) for the high beams. As shown in the diagram below, the low beams, being of the same color spectrum as a halogen bulb, offer increased vision in reduced visibility conditions. As far as the high beams are concerned, we opted for 6,500 degrees Kelvin lighting, which increases visibility in clear and optimal conditions.



SKI GOGGLES

Take ski goggles with a lens similar to warm white as an example. These lenses are excellent for dim lighting, enhancing texture and contrast so you can see bumps better and avoid rough spots. These are also optimal for snowfall as the lens tint sharpens vision while filtering snow brightness. The same principle therefore applies to the projected lighting of the SNO-WY bulbs. In the example below, you can see the major contrast difference in the details of the trails.

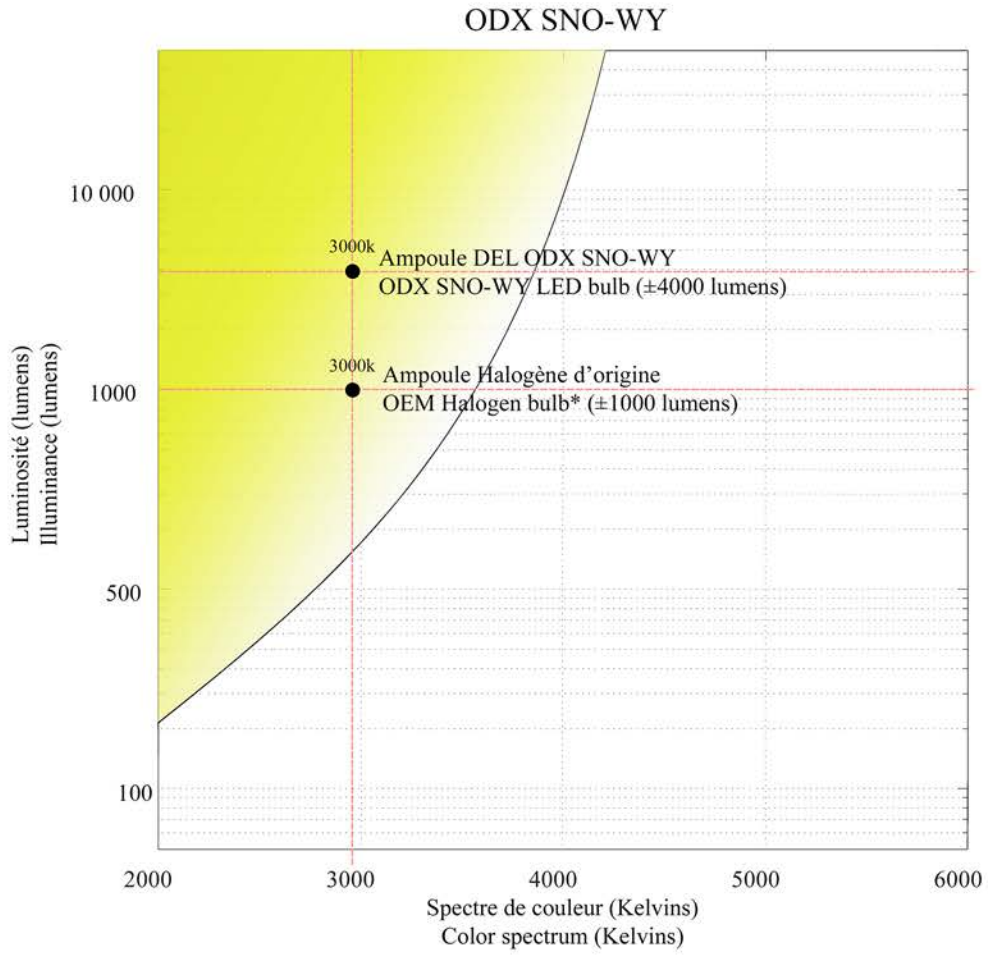
FAQ

Q: What is the brightness of ODX's SNO-WY bulbs.

A: The kit is comparable to 8000 lumens.

Q: Is yellow lighting legal on trails?

A: In Quebec, according to the VHR code V-1.2 and V-1.3 paragraph 2,28,58: An off-road vehicle must be equipped with a white headlight located at the front. However, no precise shade is specified. ODX's SNO-WY products have a spectrum of 3000 degrees Kelvin, which is the same warm white color spectrum as an original halogen bulb. The more the power of the bulb is increased, the more the human perception of the color can differ. If we took for example a halogen bulb of the same power as the SNO-WY from ODX, the color perception would be identical. See the graph below.



Q: Are they difficult to install?

A: ODX SNO-WY bulbs are direct plug-in. They are available in H4 and H13 models, which covers the majority of off-road vehicles on the market.

Q: I replaced the bulbs of my Ski-Doo G4 snowmobile with LEDs from another brand purchased online, but the lighting is mediocre. Why?

A: Indeed, the reflectors (mirror) of the original headlights of the G4 platform are unusual. These do not have the optimal degrees for reflection with a standard LED bulb, so ODX designed the SNO-WY H13 model with the BRP G4 headlight in mind. The LED chips have been positioned differently compared to a standard H13 LED bulb in order to optimize the reflection and direction of the light for this specific model as much as possible. Here is an example of the positioning of an H13 SAE J575 LED standard chip compared to the ODX SNO-WY bulb.

STANDARD LED CHIP POSITIONING VERSUS THE SNO-WY

BRP G4 HEADLIGHT RESEARCH AND DEVELOPMENT

	Low beam / Feux de croisement	High beam / Feux de route
 OEM Halogen / Halogène		
 ODX SNO-UV