Glare Free High Beam:

From Access Matrix to Full HD Solutions

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Glare Free High Beam solutions have now been used on different types of vehicles, with many different characteristics, in terms of performances, styling, product integration and system complexity. Anyway, the technology is still showing a lot of evolutions and new possibilities. There are two main reasons for theses evolutions:

- At first the Market itself with different vehicle types to be addressed: high range vehicles requiring performances and functionalities , compact ones requiring small modules, “sport” cars with usually low profile which require specific designs and reduced height, SUV, … There are also differences upon geographical localization, between Europe where Glare Free has been used for 5 years, China which is still in emerging mode for Glare Free and USA where Glare Free is still under approval on regulation point of view.

- Then the functionalities and performances: after “Analogic” Glare Free (with Mechanical movements), Matrix solutions are also showing different evolutions with different number of segments, variable resolutions, types of functions (ADB, Bending Light including Matrix in Low Beam with Pixel Light), … With the on-coming new technologies allowing High Definition Lighting, including DMD systems and Laser scanners, there are even more new functionalities such as Full AFS, Information Display, Driver Assistance with Lighting, which will make lighting systems more and more intelligent.

From Matrix systems with different styles and performances upon vehicles segments and markets, to “Full HD” solutions, these different types of applications and their benefits and drawbacks for the end user will be presented in this paper.