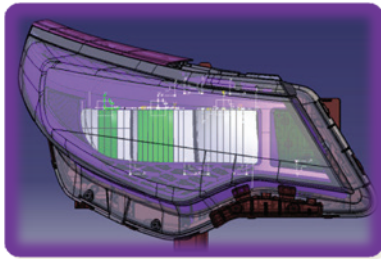


Low Cost Full LED Headlamp

OVERVIEW



Low Cost Full LED Headlamp

All LED Headlamp for the same cost as Halogen.
 Functions: Low Beam, High Beam, DRL, Turn and Position.
 Headlamp rating: "IIHS GOOD" 7 Demerit @+0.1° Up

Vertical aiming at 0.1°

TEST TYPE	Beam	Curve	VISIBILITY [m]		GLARE		GLARE		DEMERITS	
			Left	Right	test?	demerits	Left	Right	Left	Right
High	150m	L	56	64.2					0.7	
High	250m	L	72.3	81.9					0.383	
High	150m	R	62.6	55.7						0.714
High	250m	R	76.9	69.1						0.544
High	straight		175	164					0	0
Low	150m	L	55.3	59.2	OK				0.709	
Low	250m	L	62.1	62.4	OK				1.18	
Low	150m	R	61.7	57.6	OK					0.357
Low	250m	R	71.1	65.6	OK					0.667
Low	straight		80	93.1	OK				0	2.07
FINAL DEMERITS:			7.33344							
OVERALL RATING:			Good							



Mobis North America, an exterior lighting company, is a new customer to Proper Tooling. Mobis had a project that involved the CNC machining of aluminum headlamp reflectors. Proper Tooling had produced many reflector injection tools with other customers, but in this case, Mobis required a single set of high and low beam reflectors to be CNC machined.

The uniqueness here is both "A" and "B" sides of parts needed to be machined, but also parts needed to be machined from

aluminum billets. Mobis had a supplier that said they could do this work, and after four attempts, Mobis realized this supplier was incapable of doing these parts. Failure was not an option and Mobis sought an attractive company that could fulfill the requirements, Proper Tooling.

These parts will be installed into mockups, placed into a production car to prove the optical prescriptions, and finally tested on a goniometer to verify beam patterns and legal output. This requires parts to be machined with extremely tight tolerances and accuracy.

Proper Tooling's Team, utilizing experience, highly accurate fixturing (FCS), superior machining (Optics CNC Machines), and all around customer orientated staff, produced a total of four reflectors that in the customer's words, "Were perfect"!

Mobis staff will now only come to Proper Tooling for this type of work, and it has opened the door for future opportunities with them.

Steve Carolin
 General Manager

