Crash Design
In order to increase the safety, e-Light has applied crash criteria and performed crash simulations to increase the safety of the Urban EV design.
VEHICLE in ALUMINIUM

ALUMINIUM: ELASTIC-PLASTIC MATERIAL

E: 67.6 GPa
Density: 2.700 Kg/m3
CURVE: (0, 205 Mpa) (16%, 270 Mpa)
MASS: 720 Kg
MASS ADDED: 384 Kg
EV materials

VEHICLE ALUMINIUM & CFRP

CARBON FIBER: ELASTIC-PLASTIC MATERIAL

E: 78 GPa

Density: 1.560 Kg/m³

CURVE: (0, 497 Mpa) (1%, 499 Mpa)

MAXIMUM PLASTIC STRAIN: EPMX 1%

MASS: 536.3 Kg

MASS ADDED: 361 Kg (Mass added is 23 Kg less, by a reduction of battery and engines)
Aluminum 64km/h
Hybrid 64 km/h
Comparison
Comparison
Rear design
Aluminum
Comparison
Comparison
Side Aluminum 50 km/h
Side Hybrid 50 km/h
Comparison
Thanks for your attention