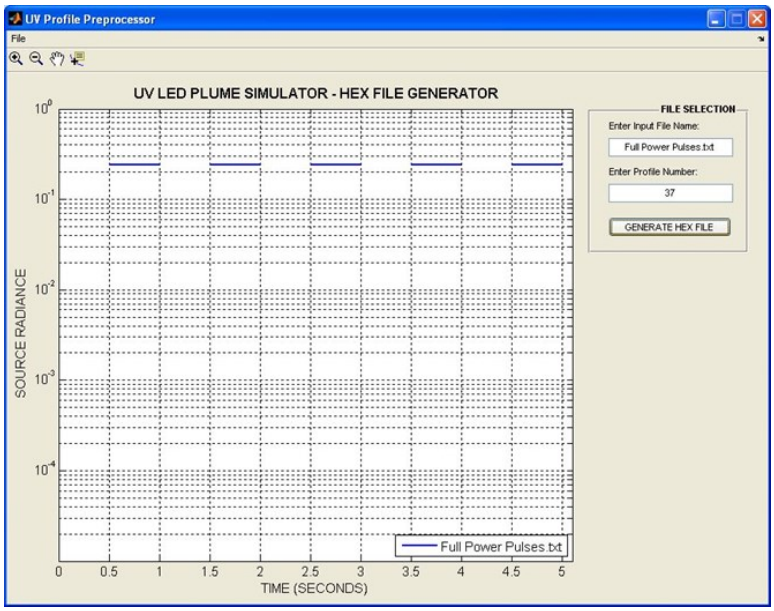
Ultraviolet (UV) Light Emitting Diode (LED) Plume Simulator

System Description

The UV LED Plume Simulator hardware components are shown below. These include the source emitter, source controller, USB flash drive, flash drive cover, controller and AC power cables, and the protective cover.

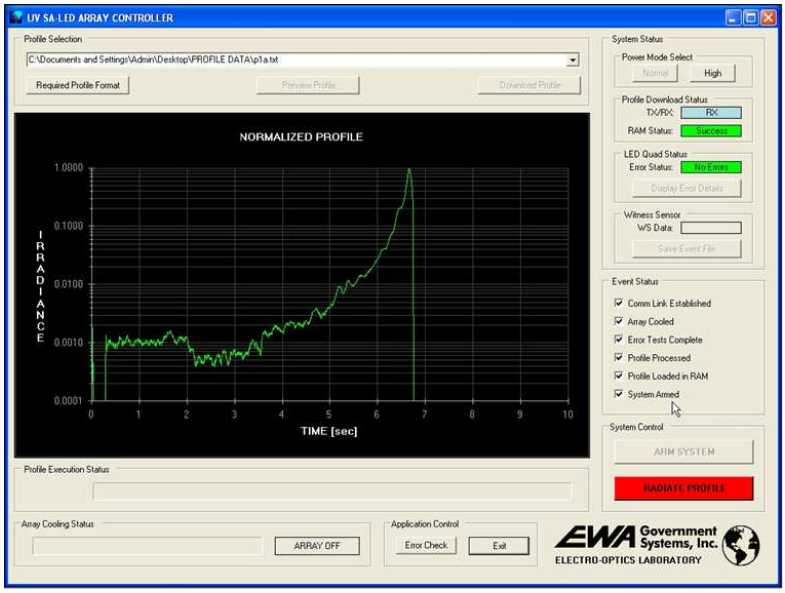


Automated Plume File Generator

The users plume signatures can be entered in ASCII format with time vs. intensity, and the Plume Simulators included software, shown below, will generate the required binary format for the simulator.

Plume Simulator Control Software

The control software allows the user to select the input file to be radiated, verify the status of the Simulator LED Array, and emit the selected profile.



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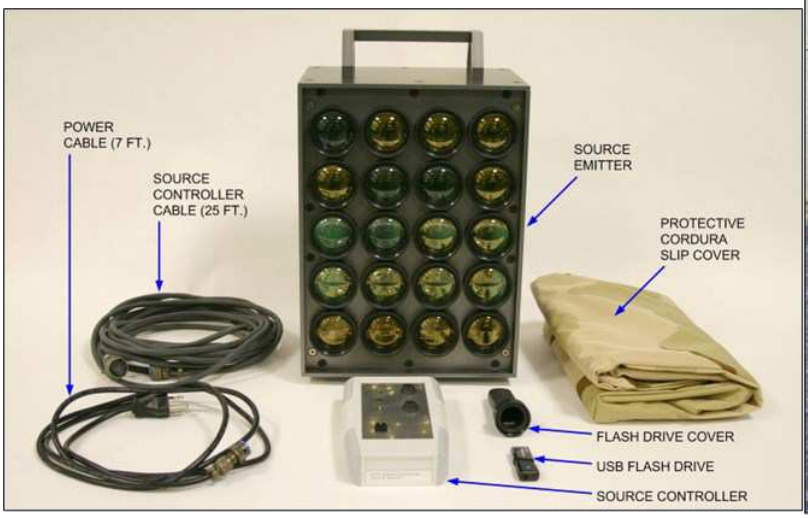
Ultraviolet (UV) Light Emitting Diode (LED) Plume Simulator

Missile Plume Simulator

Portable UVC LED based Plume Simulator providing high fidelity missile plume irradiance on sensor at ranges up to 3 kilometers.



Specification	Value	Remarks
Wavelength	CWL: 275nm, BW: ±5nm	Blue light is visible while profile is radiating
Temporal Resolution	200 Hz (5 msec update rate)	
Beam Shape (FWHM)	Rectangular: Azimuth: 8.7° Elevation: 5.0°	
Radiant Intensity (RI)	RI > 30 W/sr	Based on an inband sensor responsivity of 1.7e-16 $W/cm^2/cps$
Dynamic Range	42.3 dB	
Profiles	Accepts short, medium & long distance profiles, and custom test waveforms Maximum duration of any profile is 327.625 seconds, ~5.5 minutes Up to 100 profiles selectable via attached USB Flash Drive	
User Interface	Pushbutton Hand Controller	
Tripod Interface	Quickset Dovetail Mount	
Software	Windows compatible software for generating profiles and test waveforms	
Weight	24.5 lbs. (11.11 kg)	
Dimensions (H x W x D)	16 in. x 10 in. x 8 in. 40.6 cm x 25.4 cm x 20.3 cm	
Accessories	Profile generation software, camouflage Cordura slip cover, Pelican shipping case, and system manual	