

Compact, e-beam based mm-and THz-wave light sources

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A palletized, high-average and high-peak power electron beam-based photon source for mobile sub-mm- and mm- wavelength applications, including synchrotron and FEL beamline use as a pump and/or probe sources can be designed and built based on our recent results. Based upon the present detector calibration and bunch length estimate, the recent prototype system delivered peak powers in excess of 0.5 MW, average powers of over 20 kW in 10 ns, and a few milliwatts time-averaged (average over all time). A discussion of the device and concept of a palletized, mobile system will be discuss