Supplemental Figures

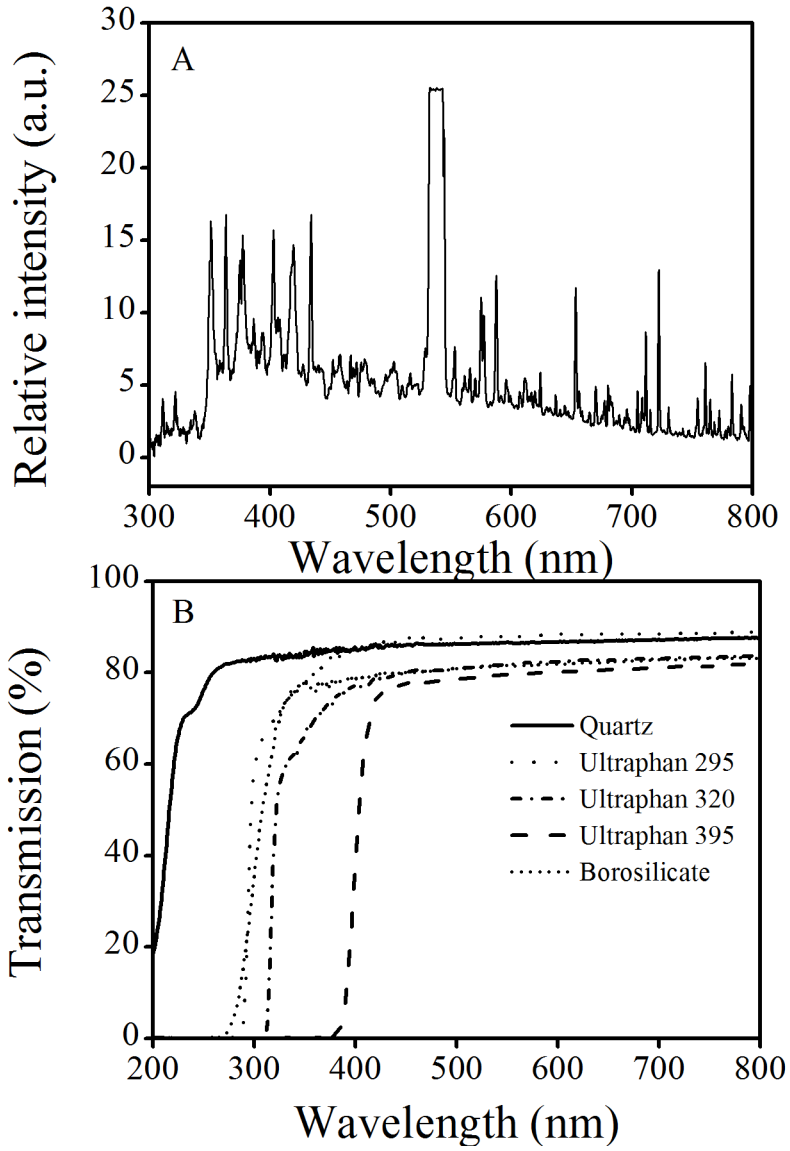

Fig.S1 (A) The spectral output of the solar simulator which was used in the short-term UV experiment. (B) The transmission spectra of quartz, borosilicate and three kinds of filter foils (Ultraphan-295, Ultraphan-320 and Ultraphan-395) which were used in this study.

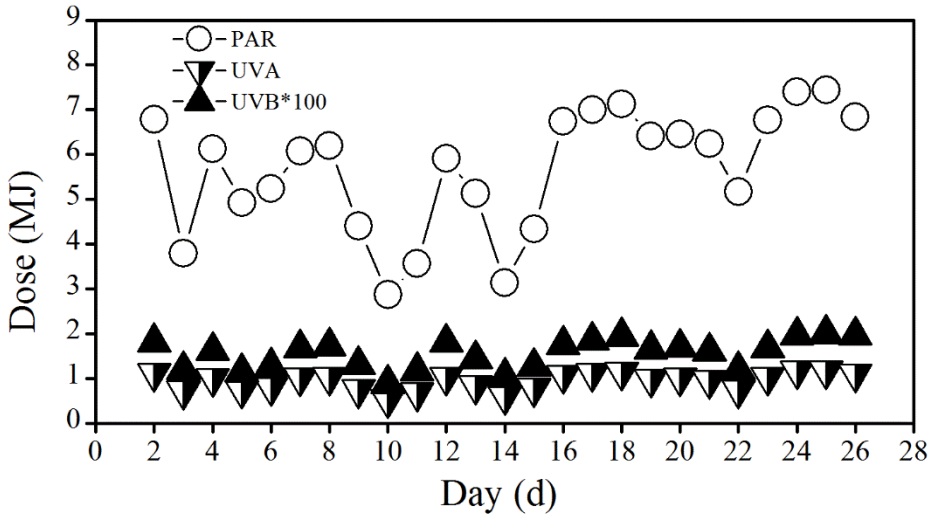

Fig. S2 The daily doses of solar PAR (400-700 nm), UVA (320-400 nm) and UVB (295-320 nm) during the experiments (2014.1.1-1.26, Xiamen).

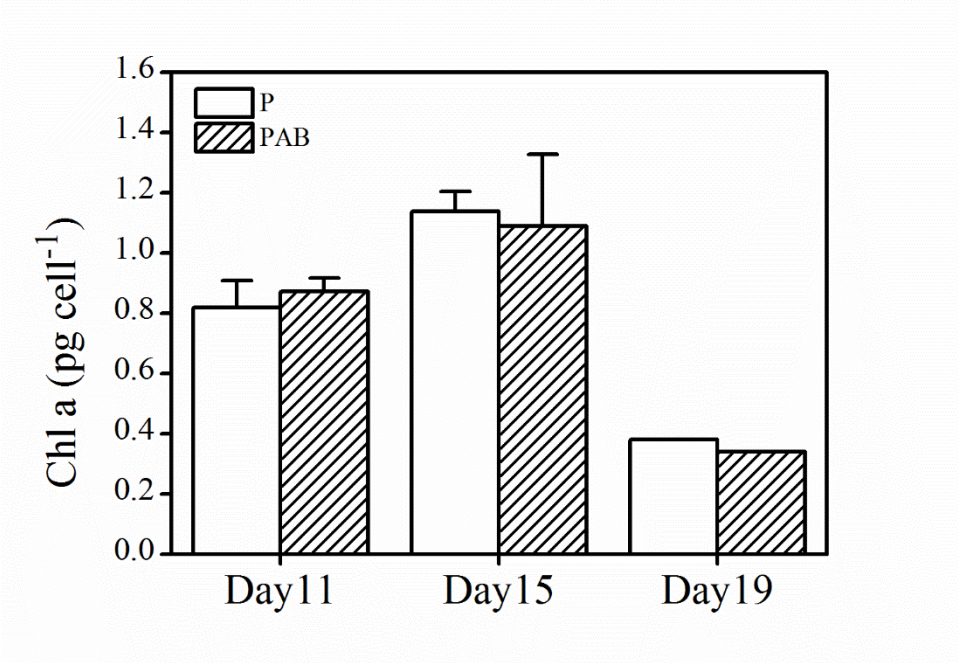

Fig. S3 Chl *a* concentration of *Trichodesmium* IMS101 grown under solar PAR (P) and PAR+UVA+UVB (PAB). The total daily solar doses of Day11, Day15 and Day19 were 3.56, 4.33, 6.41 MJ, respectively. There are no significant difference between P and PAB treatments ($p>0.05$). Values are the mean ±SD, triplicate cultures. (Note: Samples collected in the 19th day, lost replicates, n=1).

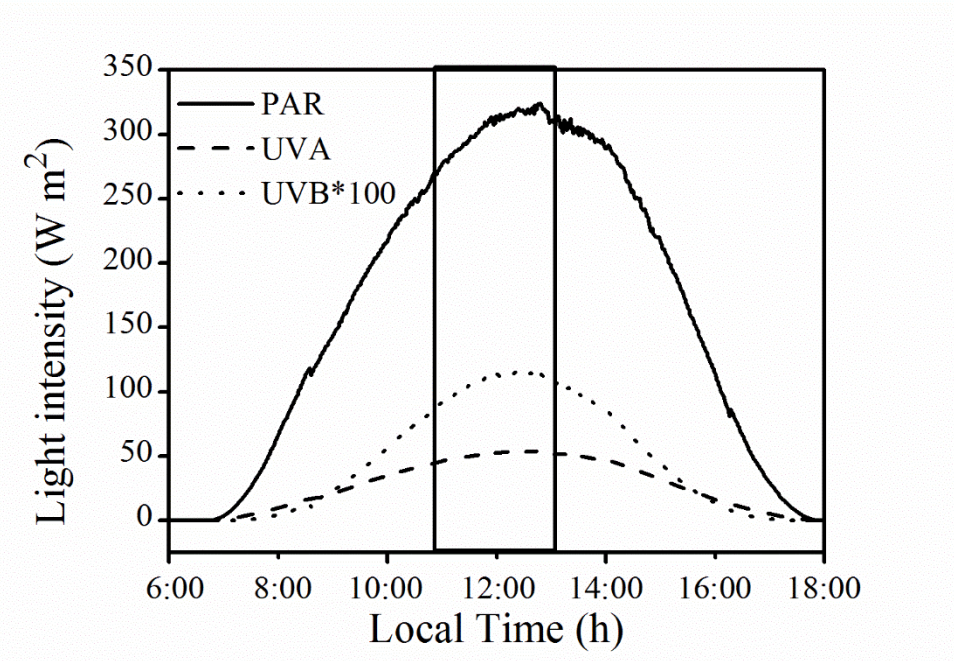

Fig. S4 Diel changes of solar radiation (W m^{-2}) on Jan 17th 2014 (the 18th day of the experiment) in Xiamen. Carbon fixation and N_2 fixation were measured during 11:00~13:00.