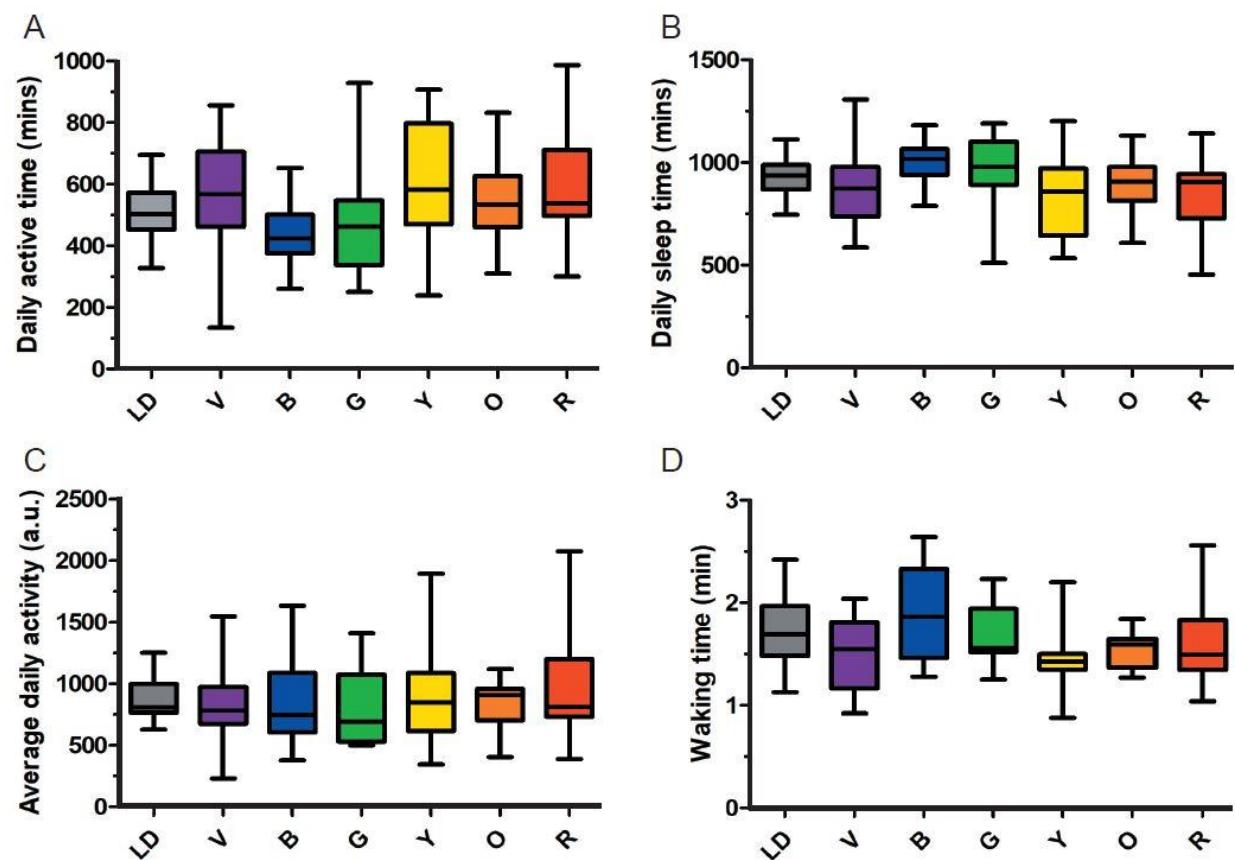


**Fig. S1. Actograms of flies under control (LL, LD), blue and green light show dark phase activity.** The double-plotted actograms represent the activity of flies under LL control (A), LD control (B), blue light (C), and green (D). The actograms of blue and green light show higher activity in the dark phase (where the lights are off at 20:00 hr & lights on at 08:00 hr). The time of the day is plotted on the x-axis, while the number of cycles is on the y-axis. The gray and white shaded regions indicate the dark and light phases of the LD (12:12) regime respectively. The double plotted graph shows bouts of flies in 10-day average activity over a 48hr time scale under control lights (LL and DD; E) and LD control and colored lights (F). The x-axis denotes the time of the day, and the y-axis represents activity bouts.



**Fig. S2. No difference in daily active time, sleep time, activity, and waking time.** The daily active time (**A**), sleep time (**B**), average daily activity (**C**), and waking time (**D**) show no effect of light. The *x*-axis denotes the light imposed (**A-D**), and the *y*-axis denotes active time (**A**), sleep time (**B**), activity in arbitrary units (a.u.) (**C**), and waking time (**D**). Other details are the same as in figure 1.

**Table S1.** Summarized statistical details of lifespan and activity assay performed under LD12:12 hr. ANOVA on the lifespan and activity data of the flies, followed by posthoc multiple comparisons by Tukey's test shows a significant difference upon independent variables and their interaction.

| Assay                      | Effect                                     | d.f.         | MS effect                    | d.f.<br>error     | MS error                | F                       | p <                        |
|----------------------------|--|--------------|------------------------------|-------------------|-------------------------|-------------------------|----------------------------|
| Lifespan                   | Light (L)                                  | 8            | 444.1                        | 81                | 18.5                    | 24.06                   | 0.0001                     |
| Average activity           | Light (L)                                  | 8            | 183171382.4                  | 276               | 17998543.9              | 10.18                   | 0.0001                     |
| Activity under LD phase    | Coloured Light (CL)<br>Phase (P)<br>CL × P | 6<br>1<br>6  | 71777<br>452878<br>93583     | 126<br>126<br>126 | 20158<br>20158<br>20158 | 3.56<br>22.47<br>4.64   | 0.0027<br>0.0001<br>0.0003 |
| Activity under Light phase | Light (L)<br>Time (T)<br>L × T             | 6<br>2<br>12 | 9433.1<br>142660.2<br>1893.5 | 819<br>819<br>819 | 446.1<br>446.1<br>446.1 | 21.15<br>319.82<br>4.25 | 0.0001<br>0.0001<br>0.0001 |

**Table S2.** Summarized statistical details of active time, sleep time, and related parameters performed under LD12:12 hr. ANOVA followed by posthoc multiple comparisons by Tukey's test and Bonferroni's test (active time, sleep time, sleep depth) shows a significant difference in independent variables and their interaction.

| Assay                   | Effect    | d.f. | MS effect | d.f.<br>error | MS error | F     | p <    |
|-------------------------|-----------|------|-----------|---------------|----------|-------|--------|
| Active time             | Light (L) | 6    | 48098     | 268           | 8220     | 5.85  | 0.0001 |
|                         | Time (T)  | 1    | 246635    | 268           | 8220     | 30.00 | 0.0001 |
|                         | L × T     | 6    | 55609     | 268           | 8220     | 6.77  | 0.0001 |
| Sleep time              | Light (L) | 6    | 48098     | 268           | 8220     | 5.85  | 0.0001 |
|                         | Time (T)  | 1    | 246635    | 268           | 8220     | 30.00 | 0.0001 |
|                         | L × T     | 6    | 55609     | 268           | 8220     | 6.77  | 0.0001 |
| Anticipation index      |           |      |           |               |          |       |        |
| Morning                 | Light (L) | 6    | 0.06      | 215           | 0.02     | 2.72  | 0.0146 |
|                         | Light (L) | 6    | 0.05      | 216           | 0.01     | 5.13  | 0.0001 |
| Sleep depth             | Light (L) | 6    | 17020     | 63            | 543.5    | 9.33  | 0.0001 |
|                         | Time (T)  | 1    | 711       | 63            | 543.5    | 1.31  | 0.2570 |
|                         | L × T     | 6    | 36460     | 63            | 543.5    | 67.09 | 0.0001 |
| Sleep latency           | Light (L) | 6    | 787.3     | 134           | 290.5    | 2.71  | 0.0162 |
| Fraction of wake bouts  | Light (L) | 30   | -         | 522           | -        | 1.5   | 0.0466 |
| Fraction of sleep bouts | Light (L) | 30   | -         | 522           | -        | 1.4   | 0.085  |

**Table S3.** Details of the filters used and its transmission obtained from the website of Lee filters, USA.

| S. No. | Filter no. | Color name  | Wavelength (nm) | Light transmitted % |
|--------|------------|-------------|-----------------|---------------------|
| 1.     | 181        | Congo blue  | 400-440         | 23%                 |
| 2.     | 201        | Full CTB    | 460-500         | 76%                 |
| 3.     | 738        | JAS Green   | 500-570         | 81%                 |
| 4.     | 101        | Yellow      | 570-590         | 87%                 |
| 5.     | 204        | Full CTO    | 590-620         | 85%                 |
| 6.     | 106        | Primary red | 620-700         | 81%                 |