



HR1102

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HOUSE RESOLUTION

2 WHEREAS, The members of the Illinois House of
3 Representatives are pleased to celebrate the 50th anniversary
4 of the light-emitting diode (LED) and honor the inventor of the
5 LED, Nick Holonyak Jr.; and

6 WHEREAS, LED technology is used in literally every aspect
7 of our lives, including the aviation, transportation and safety
8 (traffic lights), theatre, photography, architecture, and
9 aerospace industries; LEDs are also used in countless consumer
10 electronics, including flashlights, mobile phones,
11 automobiles, and light bulbs; and

12 WHEREAS, LEDs produce more lumens per watt than both
13 incandescent and halogen lighting sources, making them more
14 environmentally-friendly and cost-effective; LED's also have
15 more than 10 times the life span of an incandescent bulb,
16 making them perfectly suited for use in automotive dashboards,
17 taillights, and headlights, as well as in traffic signals and
18 consumer electronics; and

19 WHEREAS, Nick Holonyak Jr. was born, raised, and educated
20 in Illinois; he earned his bachelor's, master's, and Ph.D.
21 degrees in electrical engineering from the University of
22 Illinois; he was also the first graduate student of John

1 Bardeen, the only 2-time recipient of the Nobel Prize in
2 Physics; and

3 WHEREAS, Nick Holonyak Jr. began his career at Bell
4 Telephone Labs, where he helped develop silicon-diffused
5 transistor technology; several years later, while working at
6 General Electric, he invented the first practical
7 light-emitting diode and the first semiconductor laser to
8 operate in the visible spectrum; he also developed the first
9 electronic devices in III-V compound semiconductor alloys and
10 the basic silicon device used in household light-dimmer
11 switches; and

12 WHEREAS, Nick Holonyak Jr. joined the faculty of the
13 University of Illinois in 1963; upon his arrival at the
14 University of Illinois, he and his students developed the first
15 quantum-well laser, a practical laser used for fiber-optic
16 communications, compact disc players, medical diagnosis,
17 surgery, ophthalmology, and many other applications; in the
18 early 1980s, his group introduced impurity-induced layer
19 disordering, which converts layers of a semiconductor
20 structure into an alloy with important electronic properties;
21 this discovery solved the problem of a laser's low reliability
22 and paved the way for the reliable and durable lasers now used
23 in DVD players and other optical storage equipment; during the
24 last decade, his group invented a process that enables the

1 formation of high-quality oxide layers on any aluminum-bearing
2 III-V compound semiconductor; and

3 WHEREAS, Nick Holonyak Jr. is currently researching
4 transistor lasers; this research, currently in the early stages
5 of development, could dramatically improve the speed and
6 availability of electronic communications; and

7 WHEREAS, On October 24-25, 2012, the University of Illinois
8 will hold a symposium on its Urbana campus to celebrate the
9 invention of the LED and honor its inventor; and

10 WHEREAS, Nick Holonyak Jr. serves as a model of hard work,
11 integrity, and dedication for the people of the State of
12 Illinois; therefore, be it

13 RESOLVED, BY THE HOUSE OF REPRESENTATIVES OF THE
14 NINETY-SEVENTH GENERAL ASSEMBLY OF THE STATE OF ILLINOIS, that
15 we celebrate the 50th anniversary of the LED, honor and thank
16 Nick Holonyak Jr. for creating this important technology, and
17 wish Mr. Holonyak continued success and happiness in his future
18 endeavors; and be it further

19 RESOLVED, That suitable copies of this resolution be
20 presented to Nick Holonyak Jr. and the University of Illinois
21 as a symbol of our esteem and respect.